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The International Journal of  
**INDIAN PSYCHOLOGY**



**Person of the Month**  
**Carl R. Rogers (1902-1987)**

Editor in Chief:  
**Prof. Suresh M. Makvana, PhD**  
Editor:  
**Ankit P. Patel**

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The International Journal of  
**INDIAN PSYCHOLOGY**

Volume 4

**Issue 2, No. 95**

January – March 2017

**Chief Editor**

Prof. Suresh M. Makvana, PhD

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Ankit P. Patel

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# Message from the Desk of Editor

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It gives me great opportunity to present the forth volume of IJIP, the measure of progress. The concept of a Journal of Indian Psychology has been developing for over few years and finally another issue has come to fruition. From this edition we have ISSN for online 2348-5396 and print 2349-3429, ZDB-No.: 2775190-9, IDN: 1052425984, CODEN: IJIPD3, OCLC: 882110133, WorldCat Accession: (DE-600) ZDB2775190-9, ResearchID: P-8455-2015 in our publication. RedShine Publication, Inc is grateful to the contributors for making this Journal a reality.

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The Journal would publish peer-reviewed original research papers, case reports, systematic reviews and meta-analysis. Editorial, Guest Editorial, Viewpoint and letter to the editor are solicited by the editorial board. Large numbers of research papers were received from all over the globe for publication and we thank each one of the authors personally for soliciting the journal. We also extend our heartfelt thanks to the reviewers and members of the editorial board who so carefully perused the papers and carried out justified evaluation. Based on their evaluation, we could accept some research papers for this issue across the disciplines. We are certain that these papers will provide qualitative information and thoughtful ideas to our accomplished readers. We thank all the readers profusely who conveyed their appreciation on the quality and content of the journal and expressed their best wishes for future issues. We convey our deep gratitude to the Editorial Board, Advisory Board and all office bearers who have made possible the publication of this journal in the planned time frame.



We humbly invite all the authors and their professional colleagues to submit their research papers for consideration for publication in our upcoming issues as per the “Scope and Guidelines to Authors” given at the website. Any comments and observations for the improvement of the journal are most welcome.

**Prof. Suresh Makvana, PhD<sup>1</sup>**  
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## Person of the Month: Carl R. Rogers (1902-1987)

Ankit Patel<sup>1</sup>

<b>Born</b>	January 8, 1902 Oak Park, Illinois, U.S.
<b>Died</b>	February 4, 1987 San Diego, California, U.S.
<b>Citizenship</b>	American
<b>Known for</b>	Client-centered therapy, Student-centered learning, Rogerian argument
<b>Fields</b>	Phenomenal field, Theoretical works



Carl Ransom Rogers was an American psychologist and among the founders of the humanistic approach in psychology. The person-centered approach, his own unique approach to understanding personality and human relationships. Throughout his career he dedicated himself to humanistic psychology and is well known for his theory of personality development. He began developing his humanistic concept while working with abused children. Rogers attempted to change the world of psychotherapy when he boldly claimed that psychoanalytic, experimental, and behavioral therapists were preventing their clients from ever reaching self-realization and self-growth due to their authoritative analysis. He argued that therapists should allow patients to discover the solution for themselves. Rogers received wide acclaim for his theory and was awarded various high honors.

Dr. Carl R. Rogers was born in Oak Park, Illinois, in 1902. He received his B.A. from the University of Wisconsin in 1924, a M.A. from Columbia University in 1928, and his Ph.D. in psychotherapy from Columbia University in 1931. In 1940 Rogers became professor of psychology at Ohio State University where he stayed until 1945. He then transferred to the University of Chicago in 1945 where he served as the professor of psychology and the executive secretary at the Counseling Center. In 1957 he took a joint position in the departments of

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### **Person of the Month: Carl R. Rogers (1902-1987)**

psychology and psychiatry at the University of Wisconsin. After this Rogers traveled to a variety of colleges.

Rogers is a leading figure within psychotherapy and developed a breaking theory of personality development. This theory developed as a result of Rogers frustration with the authoritative analysis that therapists were imposing upon their patients. He is well known for his emphasis on personal awareness and allowing clients to have increasing flexibility in determining the treatment. Rogers believed that it was important for the individual to learn to understand himself and make independent choices that are significant in understanding the problem.

#### **ROGERS' THEORY**

Theory of Personality Development Rogers' therapy was an extension of his theory of personality development and was known as client-centered therapy, since the basis of the therapy was designed around the client. According to Rogers each person has within them the inherent tendency to continue to grow and develop. As a result of this the individual's self-esteem and self-actualization is continually influenced. This development can only be achieved through what Rogers refers to as "unconditional positive regard."

The element of free expression can also be illustrated in the case Mrs. L, and her ten- year- old son, Jim. During the first hour of the session the mother spent a full half-hour telling with intense feeling example after example of Jim's bad behavior. She tells of arguments with his sister, his refusal to dress himself, annoying tendencies such as humming at the table, bad behavior in school, and his refusal to help at home. Each one of her comments is highly critical of her son. Throughout the mothers talking the counselor makes no attempt to persuade the mother in feeling any other way about her son. Next, the son engages in play -therapy in which Jim makes a clay image and identifies it as his father. There is a great deal of dramatic play in which the boy shows his struggle in getting his father out of bed and the fathers resistance. Throughout this Jim knocks the clay figurines head off and crushes the body while shouting frantically. In both occurrences with the mother and her son the counselor allows the feelings to flow and does not try to block or alter them.

Another aspect of the therapy is that of positive action. Here once insight is achieved the actions that are taken are suited to the new insight that is gained. Thus, once Mrs. L has achieved a better emotional understanding of the relationship between herself and her son she is able to transfer that insight into actions which show the depth of her insight. She plans on giving Jim special affection, helping him to be more mature, and avoiding making the younger sister jealous. If such behavior had been suggested to her after the diagnosis of the case, she would have either rejected the suggestion or carried it out in a way that would almost certainly fail. Since it grew out of her own insight, she will be able to become a successful, mature mother.

### Person of the Month: Carl R. Rogers (1902-1987)

The methodology of Rogers theory proved to be very successful within the case of Mrs. L and her son. This approach has helped millions of people since Rogers first developed it.

#### TIMELINE

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1924 Completed B.A., University of Wisconsin  
1928 M.A., Columbia University  
1931 Ph.D., Columbia University, Psychotherapy  
1940 Ohio State University, Columbus, professor of psychology  
1944 President of the American Association for Applied Psychology  
1945 University of Chicago, Chicago, Ill., Professor of Psychology and executive secretary ,  
Counseling Center.  
1946 President of the American Psychological Association  
1955 Nicholas Murray Butler Silver Medal  
1956 First President of American Academy of Psychotherapist and special contribution award,  
American Psychological Association  
1957 professor in departments of psychology and psychiatry; University of Wisconsin  
1960 member of executive committee, University of Wisconsin  
1962 Fellow, Center for Advanced Study in the Behavioral Sciences  
1964 selected as humanist of the year, American Humanist Association  
1968 honorary doctorate, Gonzaga University  
1971 D.H.L. , University of Santa Clara  
1972 distinguished professional psychologist award, Division of Psychotherapy  
1974 D.Sc. university of Cincinnati  
1975 D.Ph. University of Hamburg and D.S.Sc. University of Leiden  
1978 D.Sc. Northwestern University  
1984 Union for Experimenting Colleges and Universities, Cincinnati  
1987 Died of heart attack, San Diego, California

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Rogers, Carl R, Lyon, Harold C., Tausch, Reinhard: (2013) On Becoming an Effective Teacher - Person-centered Teaching, Psychology, Philosophy, and Dialogues with Carl R. Rogers and Harold Lyon. London: Routledge

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## Schizophrenia and Its Genetic Basis: A Review Study

Somayeh Maleki<sup>1\*</sup>, Mohammad Ali Taheri<sup>2</sup>

### ABSTRACT

**Background:** Schizophrenia is a devastating mental illness that interferes with the patient's social and occupational functioning and impairs the patient's life. **Methods:** The research method is a Review Study based on library, documentary and field studies. **Results:** Studies indicate the bio-genetic basis in the etiology of schizophrenia disorder; however, the mystery of the formation of this disease is still somewhat unknown. Parents' age is considered as an effective index on incidence of children to psychotic disorders. Studies show that parents' higher age is associated with having children with schizophrenia and mostly parents, who have children with schizophrenia under the legal age, do not live with their child. **Conclusion:** This study was a review study, the results of which can be useful in planning preventive interventions.

**Keywords:** Schizophrenia, Genetic

Schizophrenia is a devastating mental illness that interferes with the patient's social and occupational functioning and impairs the patient's life (Bachmann et al., 2005). Psychosis is a general term that is used to determine the most severe psychiatric disorders caused by disintegration of thought processes, emotional disorders, loss of spatial and temporal orientation, inability to evaluate the outer reality, not compromised response to usual requirements of life, existence of delusions and hallucinations in some cases, and in general, damaging the character by pathological process. This syndrome leads to vulnerability in individuals' social life (Bartels et al., 2003). Studies indicate the bio-genetic basis in the etiology of schizophrenia disorder (Shih et al., 2004). However, the mystery of the formation of this disease is still somewhat unknown (Lee et al., 2016). In treatment-resistant psychotic patients than psychotic patients' respondent to treatment, dopamine synthesis is lower (Demjaha et al., 2012). Lack of response to treatment can be in the form of side effects, neuroleptic syndrome, extra pyramidal syndrome, weight gain, lack of therapeutic cooperation and mortality in psychotic patients Naumovska et al., 2015). With respect to biological system, high density in dopaminergic receptors is associated with favorable therapeutic prognosis (Robert et al., 2009). However, due to individual differences,

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## Schizophrenia and Its Genetic Basis: A Review Study

codification of a prevention and treatment program in the area of schizophrenia requires unique therapeutic approaches (Thibaut, 2014). In regard to existence of individual differences in psychotic patients, even smoking cigarette can cause difference in the conclusion of the treatment because of affecting on levels of blood plasma (Huang et al., 2016). These individual differences are often explained as a genetic diversity (Zhang et al., 2010). Even in the case of the same genotypes, also, some differences in the response and severity of psychotic symptoms can be seen (Ota et al., 2012). Recent studies show that environmental change can cause certain symptoms in psychotic patients that are famous as “isolation syndrome” and are associated with increasing anxiety, hyperactivity and learning and memory impairment (Oliveras et al., 2016). Some parts of reasons explaining schizophrenia disorder should be explained in case of genetic changes. Hereditary factors that are transferred from one generation to another are called gens. Gens are located in all parts of a giant molecule called Ribonucleic acid Dzaksy of DNA. DNA changes into the form of nucleoprotein accompanied proteins that appear in form of chromosome in special staining in the cell nucleus. A gen includes some information that protein is built by its help. DNA molecule is stable and has the power of replication. Change of a part of molecule's structure is called mutation. Mutation, in fact, is associated with changing the information existing in DNA molecule that as a result, a defective protein appears or building protein is totally cut. However, it should be considered that the final result of mutation is creating new characteristics in individuals of a spice. A gen can change into various shapes because of multiple mutations that are called El morph or in a row set of genes. Each gene occupies a special place on a chromosome that is called locus. In this way, all in row genes occupy specific place of the primary gene on the same chromosome. The term locus sometimes is applied instead of the term gene. In short, in the early time of appearance of genetics, gene was thought as an independent factor that was located on a string throughout chromosome like beads. Parents' age is considered as an effective index on incidence of children to psychotic disorders. Studies show that parents' higher age is associated with having children with schizophrenia and mostly parents who have children with schizophrenia under the legal age, do not live with their child (Schrack et al., 2016). Increasing parents' age is associated with increase in risk of incidence of the child to autism spectrum disorders (Byars & Boomsma, 2016). Scientific evidence suggests that prenatal factors in psychotic patients, compared to non-psychotic individuals, are a predictor of mortality in this group of patients (Rautio et al., 2016). This study was a review study, the results of which can be useful in planning preventive interventions.

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## **Women Professionals Need To Move towards Positive Health: A Review**

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### **ABSTRACT**

Women professionals are the distinct category of working women with high educational achievement, aspirations, goals and career development motivation. To fulfil such desires and aspirations they have to face various demands and expectations which may cause a set of issues. Thus it is essential for them to have positive mental health. Mental Health is the determinant factor for the personal effectiveness, success happiness and effective participation. It influences the individual's activities, behaviour, happiness and performance. The present study takes up with the objective to know the mental health status and the factors for mental health among the women professionals through research studies by various researchers.

**Keywords:** *Mental Health, Women Professionals, Marital adjustment, Work Family conflict and psychological well being*

It is an established fact that the women's contribution is enormous for the economic growth of the nation through their wide contribution of work force in every sphere. The women professionals are the distinct category of working women with high aspirations and achievement motivation due to the gift of the urbanization and modernization. Today they are with sufficient skills and knowledge and try to prove their efficiency in every field which motivates them to have high career achievement. On the other hand they need to get ready to face more expectations to sustain and to fulfill their strong desire. In their work place they are expected to be ambitious, competitive, dynamic, professionally committed with sound knowledge and update their skills and also to be competent enough. Besides in the family and in the society they need to perform various roles. Hence the women professionals have to play multiple roles in their day to day life and at the same time they are not ready to give up or compromise any of these roles.

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Thus it is the huge challenge for them to balance all without damaging their physical and psychological health, so it is important for them to have positive mental health.

### ***Mental Health***

Mental health describes either a level of cognitive or emotional well-being. It is an individual's ability to enjoy life and procure a balance between the life activities and effort to achieve psychological resilience. The concept of mental health includes the subjective wellbeing without any mental illness. There are many concepts to define mental health. According to WHO, Mental health is not just the absence of mental illness. It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. (WHO, 2007)

It is a combined outcome of five types of health-physical, emotional, moral, spiritual and social, considered as an important aspect of the total health of a person because it causes and effects other types of health (Gill & Kaur, 2005).

Mental health refers to the full and harmonious functioning of the total personality as well as to the bio-socio-psychological and spiritual well being (Dandapani, 2000).

Jagdish and Srivastava (1983) define mental health as a person's ability to make positive self-evaluation, to perceive the reality, to integrate the personality, autonomy, group-oriented attitudes and environmental mastery.

According to Smith and Segal (2011), "People who are emotionally and mentally healthy have the tools for coping with difficult situations and maintaining a positive outlook which also remain focused, flexible, and creative in bad times as well as good".

According to the expert committee of WHO on Mental health defines, the mental health as "the capacity of an individual to form harmonious relationships with others and to participate in or contribute constructively to change in the Social environment."

Bhatia (1982) considers mental health as the ability to balance feelings, desires, ambitions and ideals in one's daily living. It means the ability to face and accept the realities of life.

Mental Health is feeling about ourselves, and about others and also the way people meet the demands of life.

## **REVIEWS ON MENTAL HEALTH AMONG WOMEN PROFESSIONALS**

The technological development and modernization have brought many changes in the lives of women today. These changes insist them to perform various roles in order to go along with this

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current world. This new demands and expected role changes force them to equip themselves through increasing their awareness, skills, knowledge and to avail the resources and opportunities effectively with their participation. Hence it is essential for them to have more adjustment in the family and in their profession as well.

**Dr. Shikha Goel, Dr. Darshan Kaur Narang and Dr. Kavita Koradia** have conducted their study (2013) on “The marital adjustment and mental health in middle aged couples (40-55 years) from Delhi, India” with the sample comprised of 100 working couples (n=200) which are bank employees and doctors, within the age range of 40-55 years. They stated that the bank employees, autonomy are positively correlated with family adjustment, positive self evaluation, financial adjustment and social adjustment; whereas integration of personality is found correlated with role distribution. On the other side, perception of reality is negatively correlated with the recreational adjustment and role distribution. A significant interactive affect of job and age on marital adjustment, mental health is found. Not much difference is there in the marital adjustment and mental health of the bank employees and doctors. It is assumed that the bank employees and doctors are very ambitious; career oriented and spends more time outside the family. So, they have to make adjustment within the family responsibilities and work roles. This can have an impact on their marital adjustment and mental health. Females are having better marital adjustment than males. If working females play dual roles, they are over burdened but still they try to make adjustments in family and are satisfied and cool under all the circumstances. They participate in family matters, cooperate more and make themselves available when ever required. They try to seek recreation and satisfaction out of the successful management.

**Srimathi, N. L., and Kiran Kumar, S. K.** (2010) have conducted their study about “Psychological Well being of Employed Women across Different Organisations”. They examine the level of the psychological well being among the working women in different professions with the sample of 325 women working in different organizations – industries, hospitals, banks, educational institutions and in call centers/BPOs. The results of the study reveal that women employees working in industries have least psychological well being in all the sub factors and total psychological well being scores, followed by women working in health organizations. Women employees working in banks have medium level of psychological well being scores. Women teachers have highest total psychological well being scores and also in the entire sub factors of psychological well being.

**Mishra Garima and Dr. Kiran U. V.**(2014) have carried out a study about the “Impact of Marital Status on Mental Health of Working Women” in Lucknow. The 90 working women from various institutions and sectors are the samples of their study. It is revealed that the married working women have more difficulty in managing their work and family as compared to unmarried working women. It is also observed that married working women have stressful job



experience because they had to make balance between their family and job. In the other case, unmarried working women have less stressful experience because they focus only on their job. The results obtain on the consequences of stress reveals significant differences among the married and unmarried working women. Married working women have to face a lot of problem like difficulty in their work, taking care of things at home, loss of interest in things, feeling emotionally numb, avoid talking about stressful situation and feeling cut off from others. Whereas, in the case of unmarried working women, consequence of stress is very optimum. Due to job stress married working women are highly affected by physical problems, they were easily startled and they do not want to remember any type of stressful experience from the past. This study intends to find out the impact of marital status on the mental health of working women. The result of the study shows that the significant effect indicates the consequence of stress on mental health of married and unmarried working women. Married women receive high mean score than unmarried working women and the result states that the unmarried working women are less affected by job stress. The study also reveals a significant effect of the emotional problem among the working women. Unmarried working women have better emotional health than the married working women. Thus the research reveals that the marital status has a significant impact on the mental health of working women.

**Jieun Song, Nadine F.Marks and Gyoung-Hae Han** (2007) have studied about “Work, family, work-family spillover and mental health among working adults - A comparison of data from national surveys in Korea and the U.S”. Guided by bioecological systems theory, this study aims to examine the associations between the work micro systems characteristics (working hours, decision latitude, work pressure), family micro systems characteristics (marital status, parental status), work-family mesosystem factors (positive and negative work family spillover) and mental health (depressive symptoms, positive effect, psychological well-being) among the working women and men. The moderating effects of the cultural context (Korea vs. U.S.) are also evaluated. OLS regression models are estimated using the data from 1,260 working women (Korea: 463, U.S.: 797) and 1,659 working men (Korea: 795, U.S.: 864) aged 30-59 who participated in nationally representative survey studies of middle aged adults in Korea (MIDKO) and the U.S. (MIDUS).Results indicate that: (1) The associations between the work micro system factors and mental health of working adults are somewhat different across the countries. More working hours is associated with the better mental health of women and men regardless of the country context. More work pressure is associated with the women's poorer mental health, particularly among the U.S. women. More decision latitude is associated with the better mental health, particularly among Korean men. (2) There are significant differences between the countries in associations between the family micro system factors and mental health. Being married is associated with the better mental health among Korean women and men compared to the U.S. women and men. Having children is also associated with the poorer mental health among Korean women and men compared to the U.S. women and men. (3) There are significant differences across the cultural context in the strength of associations between the work-family

spillover and mental health for some mental health dimensions. Positive work to family spillover is associated with the better mental health among the working adults, except for Korean women who has experienced more depressive symptoms with the presence of more positive work to family spillover. Negative work to family spillover is linked to poorer mental health of working adults, particularly among the U.S. women and men compared to their Korean counterparts. Positive family to work spillover is associated with the better mental health of women and men, particularly among the U.S. women and men compared to their Korean peers. Negative family to work spillover is associated with the poorer mental health of working women, particularly among the U.S. women compared to Korean women. Negative family to work spillover is also associated with poorer mental health of working men, and this association is stronger among Korean men in contrast to the U.S. men. Overall, findings suggest work, family, and work-family spillover are significantly associated with the various dimensions of mental health of the working adults, sometimes contingent on the cultural context, supporting the assumptions of the bioecological systems theory.

**Soumya Sharma and R.K. Sokhi (2016)** conduct their research study on “Psychological well-being amongst women professionals in different spheres of work-life”. They examine the role of profession in determining psychological well being amongst the working women with the sample of 180 working women aged 25-55 years and employed in three different working sectors viz. Public (60), Private (60) and Teaching (60) is selected. The aim of the present research is to study the relationship between professional groups (Public, Private and Teaching) and psychological well-being, and if any significant difference emerges in the levels of psychological well-being across the three groups. According to the findings of the study, teaching professionals exhibit the highest psychological well-being level followed by public sector and lastly private sector professionals. It is also found that teaching women professionals have significant higher level of autonomy and personal growth as compared to other two professional groups and private women professionals have significant higher levels of purpose in life as compared to other two professional groups. From the findings of the present research the public women professionals have found to be high on the sub-dimension of the environmental mastery.

These findings can be attributed to the fact that public sector professionals have fixed working hours, flexibility and a sense of job security as compared to private sector professionals who are working under the constant pressure in order to meet the deadlines and are not provided enough flexibility and job security which could lead to an overall low psychological well-being.

**Mustafa Koyuncu, Ronald J. Burke and Jacob Wolpin (2012)** conduct their research study on “Work-family conflict, satisfactions and psychological well-being among women managers and professionals in Turkey” with the sample size of 143 women, most working in the public sector, using anonymously completed questionnaires. About half are married and about half have children. They examine the correlation and consequences of work family conflict among

managerial and professional women working in Istanbul, Turkey. They have measured work family conflict (WFC), both work interfering with family and family interfering with work. The findings of the study reveal that the respondents indicate relatively low levels of WFC. Levels of work interfering with family and family interfering with work are significantly and positively correlated. Hierarchical regression analyses, controlling for both personal demographic and work situation characteristics, show that the WFC generally predicted both work and psychological well-being outcomes, work interfering with family being a consistently stronger predictor of these than the family interfering with work. Managerial and professional women report higher levels of work to family work interference than family to work interference (H1), scores on work to family interference are significantly and positively correlated with scores on family to work interference. The respondents (H2), managerial and professional women reporting higher levels of work to family interference would report lower levels of work outcomes and psychological well-being (H3), and work to family interference would have stronger effects of work and well-being outcomes than the family to work interference (H4). Contrary to H4, family to work interference has no relationship with either work or well-being outcomes. The families with children in Turkey have to access effective child care, often from other family members (e.g. parents, siblings, relatives) or from relatively inexpensive child-care workers. Thus, guilt about leaving one's children at home while working is likely to be low among these Turkish women, perhaps lowering both family-work conflict and WFC. Nevertheless, the findings indicate that the higher levels of work to family interference are associated with lower levels of psychological health and less favorable work outcomes.

## **CONCLUSION**

There are many research studies on working women and their problems due to their multiple roles and the consequences behind these role demands by various researchers. These studies covered the various areas like work life balance, marital adjustment, family adjustment, role stress, occupational stress and the health issues. An important gap to be noticed here is that the positive sides of health especially mental health with different dimensions has to be studied. It is very vital today, because the women's career and profession has accepted but still the roles and responsibilities are not shared by anybody. Besides the women are getting ready to overcome their hurdles without giving up any of their roles. Thus their positive health must be strengthened by themselves to avoid the health issues and more in depth researches are needed in this area.

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## Effect of Life Skill Training on Life Style and Health Concern of Adolescents

Dr. Ritu<sup>1\*</sup>

### ABSTRACT

Today the need to analyze health behaviour is as imminent as ever, particularly at school. Adolescent students find themselves in a new, challenging and competitive environment; most of them are experiencing independence and responsibility for the first time in their lives. During this time they consequently adopt new health behaviours and there may be a risk that they continue with unhealthy lifestyle choices that were established during their adolescent years, which makes them a risk group not only during these years but for the rest of their lives. Therefore, the purpose of the present study was to investigate the effect of life skill training in adolescent after obtaining the life style and health concern of adolescents and examined associations between lifestyle and health concern. Total sample comprised of 60 students (12 to 14 years of age) from Rohtak District of Haryana, who has received life skill training. Life Style Schedule and Adolescent Health Concern Inventory were administered in a group session one by one both before training was given and after the training was over. The results showed that subjects improved significantly in post condition on life style and health concern. This suggests that life skill training has a positive effect on life style and health concern of adolescents. Also, a significant relationship has been obtained between the life style and adolescent health concern. Based on the findings, it is necessary to prioritize implementing of health related life skill programs in order to change and modify the unhealthy life style related factors. Also it is needed to provide special facilities to select healthy living behaviors among adolescents.

**Keywords:** *Life Skill Training, Life Style, Health Concern and Adolescents*

Now a days, health promotion is increasingly paid more attention (Adams, Bowden, Humphery, Mc Adams, 2013) and one of the main challenges of countries is providing health care (Ochieng, 2006) according to the health promotion approaches so that people could be made capable to be responsible for their own health and follow healthy life style (Spratt, Shucksmith, Philip,

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## **Effect of Life Skill Training on Life Style and Health Concern of Adolescents**

Watson, 2006). This practice should be started from childhood and adolescence and keep individuals safe against major health risk during their life (Amir et al, 2008).

The young are the future of society, but they are also very much its present. Adolescents who are healthy and happy are better equipped to contribute to their communities as young citizens despite the major shifts occurring in the world they are about to inherit. Bad habits and poor hygiene, persistent behavioural risks, poor basic sanitation, and new and emerging diseases are contributing to a deadly mix that is changing the classic picture of healthy youth.

Lifestyle behaviours are usually formed during youth (Steptoe et al., 2002). Students find themselves in a new, challenging and competitive environment; most of them are experiencing independence and responsibility for the first time in their lives. During this time they consequently adopt new health behaviours and there may be a risk that they continue with unhealthy lifestyle choices that were established during their adolescent years, which makes them a risk group not only during these years but for the rest of their lives.

There is an interlock relationship between health problems and life style. In other words, life style is one of the most important influential factors on individual's health and illness (Tashiro, 2002). On the basis of statistical data, 53% of deaths are related to the life style (Baroogh, Nuktehnan, Kazemnejad, Nuruizi, 2003). Healthy life style causes a balance in life in which a person chooses intentional standards options for himself (Li et al, 2008). In fact, healthy life style has been considered as a valuable source for decreasing health problems, promoting health, managing stressful events and improving the quality of life (Rafifar, et al, 2005). World Health Organization has predicted that life style is responsible for around 70%-80% of mortality rate in developed and 40%-50% in developing countries (Norman, Kaplan, 2004). Considering the fact that the attitudes and behaviors of students which is said to be formed during young adulthood (Neumark, 2006) are often a determinant of healthy lifestyle habits, and helping adolescents makes healthy lifestyle choices and preventing them from malicious behavior is crucial. Besides, in order to prevent these malicious behaviors, healthy lifestyle should be established in adolescence (Amir et al, 2008).

A substantial number of studies have been generated reporting that adolescent students engage in unhealthy lifestyle behaviours such as substance abuse (Fromme, Corbin, & Kruse, 2008; Halperin, Smith, Heiligenstein, Brown, & Fleming, 2010; Vaughan, Corbin, & Fromme, 2009; White et al., 2006), physical inactivity (Greene et al., 2011; Ulla Diez & Perez-Fortis, 2010; Von Bothmer & Fridlund, 2005) and poor diet (Sira & Pawlak, 2010). In addition, many adolescent students experience stress caused by a number of factors, e.g. failing classes, competition or social pressure, which can result in other health problems such as insufficient sleeping patterns or a decrease in mental wellbeing.

## **Effect of Life Skill Training on Life Style and Health Concern of Adolescents**

Only few studies have attempted to link life style with self-rated health among students. One study by Dodd et al.(2010) clustering five lifestyle factors (smoking, physical activity, binge drinking, fruit and vegetable intake and psychological stress) in students in higher education in Great Britain found that nearly half of the sample (46%) was characterized as having an unhealthy lifestyle. This subgroup consisted of a larger percentage of female as well as a higher percentage of Asian or Asian British and Black or Black British students (Dodd et al., 2010).

Health information and knowledge about diseases and about bodily conditions and functions are evident determinants of health status and outcomes. However, as information (learning to know) is only useful if reinforced by positive attitudes (learning to be) and useful skills (learning to do), the ability to recognize a potential problem must be accompanied by the will and the identification of the means necessary to avoid it.

World Health Organization has advocated the development of life skills in order to promote psychosocial competence. Psychosocial competence is a person's ability to deal effectively with the demands and challenges of everyday life. It is a person's ability to maintain a state of well being, and to demonstrate this in adaptive and positive behaviour while interacting with others, in his/her culture and environment.

Psychological competence has an important role to play in the promotion of health, in terms of physical, mental and social well-being. Enhancement of psychological competence could make an important contribution to well being of individuals, especially, where health problems are related to behaviour, and where the behaviour is related to an inability to deal effectively with stress and pressures in life. In school- based programs for children and adolescents, the teaching of life-skills in a supportive learning environment can do this (WHO, 1994).

Life skills are abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life. Research has shown that if we have the information and knowledge available to people and create situations where people can experience their learning practically, then this knowledge, values and attitudes will be changed into the potential abilities. This ability helps people to know what to do in any position and how to do it (Soltani 2007).

A research conducted by Bagheri and Bahrami (2011) showed that life skills training to students make significant changes in knowledge, attitudes and self-esteem. Penter (2012) have done a study on teaching life skills in guidance and high schools and the results expressed that life skills training program was used for the prevention of suicide, violence and negative behaviors and academic failure. Gilbert (2011), one of the main goals in life skills, is improving mental health in children and adolescents. Many studies were done about the impact of life skills training program on various aspects of mental health, and the results have shown that training these skills

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increase self-esteem, improve social skills and interpersonal relationships, increase positive social behavior and social adjustment, increase family system satisfaction and adjustment with family, increase problem solving skills.

A large number of articles have been published on health and lifestyle behaviours among students in various countries possibly dominated by the United States and South-East Asia, but there is a dearth of studies which focus on Indian school students and their lifestyle and health behaviours with reference to life skill training. Due to the importance of life skill training in students and the urgency of analyzing health behaviour of adolescent students' the present study is very much relevant and will be of great help in recognizing adolescent's views and perspectives in relation to a particular type of life style and health concern. It also provides opportunity for health authorities and helpful in evaluating adolescents' life style and health concern as well as in planning appropriate preventive approaches in order to develop adolescents' capabilities. On the other hand, schools could provide appropriate atmosphere for teaching healthy life styles to adolescents and as a result will influence the community health. Thus, this study aimed to study the effect of life skill training in adolescent after obtaining the life style and health concern of adolescents and examined associations between lifestyle and health concern.

### *Hypotheses*

1. There would be significant effect of life skill training on life style of school students.
2. There would be significant effect of life skill training on health concern of adolescents.
3. There would be significant correlation between life style and adolescent health concern.

## METHODOLOGY

A pre and post test design was adopted to assess the effect of the life skill training program. Life Skill Training was conducted collectively in 13 sessions at alternate day, one session per day for 60 minutes. The training program includes theoretical and practical content with providing activities (individual and group).

### *Sample*

The sample included 60 students in the age group of 12 to 14 years (Mean=13.15; S.D= .78) studying in grade 8 in schools of urban localities from Rohtak City of Haryana.

### *Tools*

For collecting the required data for both pre - and post test conditions following questionnaires were used:

1. **Lifestyle Schedule:** A detailed lifestyle schedule which was constructed on the basis of leading health indicators mentioned by the US department of Health and Human Services (HSS) (Healthy People 2010, 2000) was used. The Leading Health Indicators include



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individual behaviours, physical and social environmental factors and other important health system issues that greatly affect the health of individuals and communities. The different lifestyle dimensions that were included in the lifestyle schedule are Physical Activity, Sleep, Nutrition & Health, Mental/Social Health, Injury & Violence, Environmental Quality and Health Care & Immunization.

- 2. Adolescent Health Concern Inventory:** This questionnaire was constructed by Madhu Anand and Anju in 2014. It is a self-administered inventory for adolescents. This inventory has 45 statements belong to 4 domains of Health concern such as Physical Domain, Social Domain, Psychosexual Domain and Moral Domain. The full test reliability was found to be 0.74 ( $p < .01$ ). The Internal Consistency Reliability was found to be 0.87 ( $p < .01$ ). The Test-Retest reliability was .64 ( $p < .01$ ).

### *Procedure*

The present research has been conducted in three phases:

**Phase I:** The Life Style Schedule and Adolescent Health Concern Inventory were administered on all the 60 students between the age group of 12 and 14. The instructions for the tests were given to the subjects by the research investigator and the doubts were clarified before they started giving the responses. When there was a difficulty in understanding the statements, they were explained individually.

**Phase II:** All students were given life skill training program (health-related life skills). The training program consisted of the following activities:

Session No.	Activity
1.	Introduction and information regarding formation of groups.
2.	Challenge the student's minds with the concept of skills and how to learn skill.
3.	The introduction of life skills as a health promotion program
4.	Learning about healthy food and nutrition.
5.	Learning about healthy drinks
6.	Learning about the importance of physical activities.
7.	Learning about "Eat smart, play hard"
8.	Understanding "Internet and smart phone usage"
9.	Familiarity with mode of relaxation to keep good health.
10.	Knowing about the importance of sound sleep.
11.	Understanding the role of stress in human life. Familiarity with methods for dealing with stress.
12.	Knowing about the importance and ways of good health and better life style.
13.	Feedback and Questions: To know that all the students understood and followed the activities well.

**Phase III:** After 10 days of completing 13 sessions of life skill training program, The Life Style Schedule and Adolescent Health Concern Inventory were administered again on all the students, to assess the success of the training program. The obtained data was manually scored and

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statistically analysed by mean, standard deviation and t-test. Correlation between the variables was assessed by means of the Pearson's correlation coefficient.

### RESULTS

The result of the study is presented below

**Table 1: Mean, SD and t value of Pre and Post test condition on Life Style**

Variables	Pre - Test		Post - Test		t-value
	Mean	SD	Mean	SD	
Overall Life Style	41.93	5.61	49.30	3.98	8.29**
Physical Activity	5.25	1.59	6.30	1.56	3.66**
Sleep	3.50	0.75	3.90	0.44	3.57**
Tobacco Abuse	0.00	0.00	0.00	0.00	0.00
Substance Abuse	0.00	0.00	0.00	0.00	0.00
Nutrition & Health	6.18	1.48	7.65	1.13	6.10**
Mental/Social Health	16.73	2.46	18.73	1.92	4.96**
Injury & Violence	3.40	0.92	4.38	0.61	6.87**
Environmental Quality	3.28	0.85	4.02	0.70	5.17**
Health Care & Immunization	3.57	1.11	4.32	0.77	4.30**

\*\* Sig. at 0.01 level

The table 1 shows that there was significant difference between pre and post test conditions on life style of school students. There was a significant difference between pre and post condition scores of Overall Life Style ( $t=8.29$ ,  $p<.01$ ), Physical Activity ( $t=3.66$ ,  $p<.01$ ), Sleep, ( $t=3.57$ ,  $p<.01$ ), Nutrition & Health ( $t=6.10$ ,  $p<.01$ ), Mental/Social Health ( $t=4.96$ ,  $p<.01$ ), Injury & Violence ( $t=6.87$ ,  $p<.01$ ), Environmental Quality ( $t=5.17$ ,  $p<.01$ ), and Health Care & Immunization ( $t=4.30$ ,  $p<.01$ ). However, school students have given no response for tobacco abuse and substance abuse which indicates that probably they are unconcerned about these variables. Thus, first hypothesis which stated significant effect of life skill training on life style of school students is accepted.

**Table 2: Mean, SD and t value of Pre and Post condition on Adolescent Health Concern**

Variables	Pre - Test		Post - Test		t-value
	Mean	SD	Mean	SD	
Overall Health Concern	24.47	2.03	27.13	2.04	7.18**
Physical Health Domain	7.22	1.12	7.87	1.14	3.15**
Social Health Domain	4.30	0.96	4.95	0.98	3.66**
Psychosexual Health Domain	5.83	1.79	6.68	1.84	2.57**
Moral Health Domain	7.12	1.11	7.63	1.03	2.65**

\*\* Sig. at 0.01 level

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The table 2 shows that there was significant difference between pre and post condition on health concern of adolescents. Significant difference between pre and post condition in Overall Health Concern ( $t=7.18$ ,  $p<.01$ ), Physical Health Domain ( $t=3.15$ ,  $p<.01$ ), Social Health Domain ( $t=3.66$ ,  $p<.01$ ), Psychosexual Health Domain ( $t=2.57$ ,  $p<.01$ ), and Moral Health Domain ( $t=2.65$ ,  $p<.01$ ) have also been observed. Therefore, second hypothesis which stated significant effect of life skill training on health concern of adolescents is verified.

**Table 3: Showing correlation between Life Style and Adolescent Health Concerns**

Variables	Overall Health Concern	Physical Health Domain	Social Health Domain	Psychosexual Health Domain	Moral Health Domain
Overall Life Style	.73**	.31**	.34**	.42**	.26**
Physical Activity	.51**	.18*	.22**	.31**	.20*
Sleep	.34**	.08	.03	.33**	.09
Tobacco Abuse	.00	.00	.00	.00	.00
Substance Abuse	.00	.00	.00	.00	.00
Nutrition & Health	.58**	.34**	.29**	.29**	.17
Mental/Social Health	.58**	.21*	.32**	.35**	.18*
Injury & Violence	.47**	.23*	.16	.34**	.07
Environmental Quality	.41**	.12	.24**	.22*	.19*
Health Care & Immunization	.33**	.21*	.11	.09	.25**

\*\* Sig at 0.01 level; \* Sig at 0.05 level

The table 3 shows the correlation coefficient of Life Style and Adolescent Health Concerns. Results revealed that there was a positive correlation between Life Style and Adolescent Health Concerns which indicates that higher the score of life style, the subject's life style would be good and higher the score of health concern, the subjects would be more concerned about health. The correlation coefficient of overall Life Style was found to be positively correlated with Overall Health Concern ( $r=.73$ ,  $p<.01$ ), Physical Health Domain ( $r=.31$ ,  $p<.01$ ), Social Health Domain ( $r=.34$ ,  $p<.01$ ), Psychosexual Health Domain ( $r=.42$ ,  $p<.01$ ) and Moral Health Domain ( $r=.26$ ,  $p<.01$ ). The first dimension of Life Style i.e. Physical Activity was found to be positively correlated with Overall Health Concern ( $r=.51$ ,  $p<.01$ ), Physical Health Domain ( $r=.18$ ,  $p<.05$ ), Social Health Domain ( $r=.22$ ,  $p<.05$ ), Psychosexual Health Domain ( $r=.31$ ,  $p<.01$ ) and Moral Health Domain ( $r=.20$ ,  $p<.05$ ). Similarly, Sleep was found to be positively correlated with Overall Health Concern ( $r=.34$ ,  $p<.01$ ) and Psychosexual Health Domain ( $r=.33$ ,  $p<.01$ ). Also, Nutrition & Health dimension of life style was found to be positively correlated with Overall Health Concern ( $r=.58$ ,  $p<.01$ ), Physical Health Domain ( $r=.34$ ,  $p<.01$ ), Social Health Domain ( $r=.29$ ,  $p<.01$ ) and Psychosexual Health Domain ( $r=.29$ ,  $p<.01$ ). The finding reveals that Mental/Social Health was positively correlated with Overall Health Concern ( $r=.58$ ,  $p<.01$ ),

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Physical Health Domain ( $r=.21$ ,  $p<.05$ ), Social Health Domain ( $r=.32$ ,  $p<.01$ ), Psychosexual Health Domain ( $r=.35$ ,  $p<.01$ ) and Moral Health Domain ( $r=.18$ ,  $p<.05$ ). However, Injury & Violence was found to be positively correlated with Overall Health Concern ( $r=.47$ ,  $p<.01$ ), Physical Health Domain ( $r=.23$ ,  $p<.05$ ) and Psychosexual Health Domain ( $r=.34$ ,  $p<.01$ ). It was found that Environmental Quality was positively correlated with Overall Health Concern ( $r=.41$ ,  $p<.01$ ), Social Health Domain ( $r=.24$ ,  $p<.01$ ), Psychosexual Health Domain ( $r=.22$ ,  $p<.01$ ) and Moral Health Domain ( $r=.19$ ,  $p<.051$ ). The Health Care & Immunization dimension of life style was found to be positively correlated with Overall Health Concern ( $r=.33$ ,  $p<.01$ ), Physical Health Domain ( $r=.21$ ,  $p<.05$ ) and Moral Health Domain ( $r=.25$ ,  $p<.01$ ). Therefore, third hypothesis which stated significant correlation between life style and adolescent health concern is accepted.

## DISCUSSION

Since education is an organization that can train creative, healthy, thoughtful and efficient human beings and since the base of health programs is prevention, the role of the school as one of the main centers of prevention is important. Therefore, life skills training can definitely help students in direction to life style, health and other life problems. The present study focuses on these life skills as youth survival skills in healthy conditions and, using the framework of WHO's definition of three aspects in health: physical, psychological, and social aspects, aims to understand the skills that are useful in enhancing health in daily life (health-related life skills, hereafter). In the present study, the life skills training effect on life style and adolescent health concerns were examined on school students.

The findings emerging from present study confirm that training life skills results in increasing Life Style and Health Concerns of Adolescents. Significant differences were observed between all the variables at .01 level of significance. In post condition, subjects have improved in overall life style, physical activity, sleep, nutrition & health, mental/social health, injury & violence, environmental quality, health care & immunization. Significant difference was also obtained between pre and post condition on overall health concern, physical, social, psychosexual and moral health domain respectively. The overall adolescent health concern and in its domains are found to be increased significantly in post condition. The findings of the present research are in line with the findings of Aliloo (2004), Yadavari (2004), Yousefpour (2009), Errecart and Ross (2002), Vertiainen (2004) which showed that training life skills results in increasing individuals' health condition. The findings are also supported by Cutinha (2012) and Srikala and Kishore (2010) who reported that education of the impact of model on life skill education of school children improves adjustment of the adolescents with teachers, school, increases prosocial behavior, coping with stress and self esteem as there was a significant difference between experimental and control groups. Present findings are also supported by a recent study conducted by Anand and Ritu (2015) in which they have observed that life skill training has a positive effect in youth problems and adjustment of adolescent girls going to school.

## **Effect of Life Skill Training on Life Style and Health Concern of Adolescents**

The results obtained from the present study showed that training life skills has been effective in improving life style and health concern of adolescent. Psychologists in recent decades have found that due to the increasing changes and complexities of society and expansion of social relations, preparedness of individuals especially the young generation to cope with difficult situations seems necessary. Life skill training is a program that its usefulness has been demonstrated in numerous studies. Generally, the findings of this study and similar studies indicate that through life skill training we can improve life style and the health concern of adolescents as prevention for health.

The findings reveal significant positive correlation between life style and health concern of adolescent which indicate that adolescents who have healthy life style enjoy good health and are more concerned about their health and vice-versa. The observed positive correlation support the view that healthy life style adolescents are able to think about their health with special reference to their physical, social, psychosexual and moral health. The present findings are supported by a recent Indian study conducted on adolescent school students by Ritu, Singh and Anand (2015) in which they found that students who have unhealthy life style such as excessive internet usage were less concerned about their health, while students who used internet within limit (healthy life style) were more concerned about their health. In other study, including several lifestyle factors, found a negative relationship between unhealthy lifestyle and mental and physical health (Pisinger et al., 2009).

The study is, however, not without limitations. Sample size is one of the major limitations of this study. The sample is consisted of private school students of urban locality only. The results of the study may not necessarily apply to all school students and possibly if investigated at larger school level the results would have been slightly different. All findings were derived from the self-reported questionnaires which may have some sort of bias, since participants may not be reliable in the report of their behaviours.

The study concludes that the intervention of life skill training is helpful for the school adolescents to take positive actions and improving their skills of life style and health concern. Life skills are the building blocks of one's behavior and need to be learnt well to lead a healthy, meaningful and productive life. Attempts should be made to understand the adolescent's problems and guide them in acquisition of life skills. The intervention on life skill development is a good support system for adolescents at the community level. Health promotion programs at educational institutions may be beneficial in raising student awareness of their present and future health in relation to their lifestyle behaviours. According to the results of study, it should be the top priority for authorities and health care managers to train school teachers for the healthy life style to the students and provide them facilities to choose healthy behaviors. Based on the results, health care providers should encourage adolescents to do more physical activities. Moreover, educational organizations should provide sport fields and develop sport facilities and

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equipments in the schools and increase sport hours to encourage about the life style of young adolescents. It is also necessary to inform students and their families about healthy nutrition principles and application of different methods for nutritional education in order to modify and correct wrong nutritional habits. Schools could organize appropriate programs for teaching healthy life styles to the adolescents and as a result will enhance the community health.

Health promoting life style could provide a comprehensive and extensive spectrum of health for adolescents, educators and school psychologist could provide interventional programs for health concern and healthy life style based on the present condition for students. It is necessary to prioritize implementation of health related life skill programs in order to change and modify the unhealthy life style related factors.

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## Prevalence and Nature of Internet Use among Adolescents in Vadodara (Gujarat)

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### ABSTRACT

Internet has been a very facilitating medium and making lives easier for many of us. Internet is increasingly becoming a channel through which people, and especially adolescents, socialize and be in constant contact with their family, relatives and friends. More than a medium of acquiring knowledge, for adolescents, it has become a medium of expression of their implicit feelings and to know what is happening in their peer group. The current research aims to study the prevalence and nature of Internet use among adolescents. Population for the research included adolescents of Vadodara District in Gujarat. A total of 1657 adolescents were taken as the sample for the study. A survey research was conducted on 1657 adolescents using a self developed questionnaire along with Young's Internet Addiction test. Results indicate that 44.8% of the participants are Average Users of the Internet, while 14.6% of the participants belong to the category of above average users of the Internet. The present study also shows that participants use the Internet mainly for social communication and social networking sites are the most commonly used sites on the Internet.

**Keywords:** *Internet, Internet Use, adolescents, Social Networking Sites*

Discovered only a few decades ago, the Internet is a system of enormous technical and social complexity. It comprises of a gigantic but almost invisible universe that includes thousands of networks, millions of computers, and billions of users across the world (Greenfield & Yan, 2006). In the past few years, computers and Internet have lost their elite status and has become a basic necessity for today's society. Many scholars, technologists, and social critics believe that these changes and the Internet, in particular, are transforming economic and social life (Anderson, Bikson, Law, & Mitchell, 1995); (Attewll & Rule, 1984); (King & Kraemer, 1995). People use the Internet for various purposes such as entertainment, education, information retrieval, communication, business, etc.

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## Prevalence and Nature of Internet Use among Adolescents in Vadodara (Gujarat)

Due to the availability of information over the Internet and easy access to various studies, researches and findings happening across the globe, the modern day education system encourages the use of Internet for its educational value. Internet access and use among adolescents has therefore grown exponentially over the past decade and hence more research has been done towards understanding the habits of Internet usage amongst adolescents than the adult population. For instance, it is reported that the primary purpose for which the adolescents use the Internet is for social reasons (Gross, 2004), despite various activities including doing schoolwork, playing games, shopping, and downloading music. The Internet provides the unique opportunity and social setting for people to interact and share ideas and opinions with individuals across the globe at the click of a button, therefore enhancing the circle of influence beyond all physical boundaries without actually having to move from the comfort of one's home. While the Internet has become an integral part of our lives today, many studies have shown that there are differences based on age group and gender in terms of uses of Internet and the amount of usage.

Most common uses of the Internet:

1. **Information seeking:** The most common use of the Internet is to seek or search for any type of information. People use various search engines like the Google and the Yahoo to know about news, weather, current affairs, education policies, government policies, laws, science and technology, law and politics, economy etc.
2. **Social networking:** The Internet and social networking sites are a component of many adolescents' development and life. There are a vast number of social networking sites available for individuals to choose from with multiple factors influencing the decision to use a particular site. With the extensive resources on the Internet, adolescents can create personal pages, provide personal information, and communicate with other people through numerous websites. One of the most popular social networking sites is Facebook. On sites such as this, users are able to provide personal information, continually update information, and even chat with friends.
3. **Communication:** People from different parts of the world are able to interact and communicate with the help of the Internet. Thanks to email, instant messages and video calling, people who are far from their loved ones can still talk. Because of blogging and social networking websites and online discussion forums, there are platforms that allow people to express themselves.
4. **Entertainment:** There is a very close relation of Internet to entertainment. Whether it is watching videos in YouTube, playing live games, watching live sports, TV shows, or downloading movies; Internet proves its domination everywhere.
5. **Online games:** Children are more interested in using the technology for their free play. Playing online games does not require necessarily having a partner unlike playing with other kind of games and free play games that children play at their homes.
6. **Online education:** This medium benefits both teachers and students. There are thousands of online courses to choose from, which cater to various fields. Aside from being an abundant portal of information, the Internet provides up to the minute news on a certain

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subject being tackled. It also reduces barriers for people with physical impairment, who may have problems getting to the library.

7. **Current affairs:** The Internet helps people to be up to date regarding the current affairs and news. Any event or incident which has taken place few minutes ago is on the Internet. It gives recent and up to date knowledge about the happenings around the world.
8. **Gambling:** The Internet is now commonly available in the home and the workplace, making it easier to partake in gambling. With an increase in access to an activity there is an increase in that behaviour. Thus, with more gambling opportunities online comes an increase in gamblers as well as an increase in problem gamblers. As the Internet is more accessible, it is becoming cheaper for people to obtain Internet services.

Research suggests that adolescents use a variety of Internet applications such as instant messaging, bulletin boards, chat rooms, and blogs to connect with their peers (Boneva, Quinn, Kraut, Kiesler, & Shklovski, 2006; Gross, 2004) and to explore typical adolescent issues such as sexuality, identity, and partner selection (Smahel, Brown, & Blinka, 2012; Subrahmanyam & Greenfield, 2008).

### *Indian Scenario*

According to an article published in The Hindu on 24<sup>th</sup> august 2013, India is the third largest user of Internet after China and the United States. The article also further reports that a global digital measurement and analytics firm, comScore has said in its report that India has over 74 million Internet users over March 2012. The Telecom Regulatory Authority of India (TRAI) quoted the number of Internet subscribers in India at 164.81 million as of March 31, 2013, with almost 87% having access to Internet via mobile phones.

Approximately 46 percent of India's offline population are youth—a demographic that is typically an early adopter of technology. Since the International Telecommunications Unions's definition of Internet users includes only the population above 6 years of age, India's future Internet user population could grow rapidly (as of 2012, its median age was the lowest in the world, with 58 percent of the total population under the age of 30) (Gnanasambandam, Madgavkar, Kaka, Manyika, Chui, Bughin, & Gomes, 2012). This demographic dividend will be a key driver of Internet growth in India. Growth projections for India's online population vary widely, ranging from approximately 150 million to 500 million new users by 2018 (Boston consulting Group).

The increase in the Internet penetration in India has been majorly driven by the rapid expansion in mobile network coverage, shrinking device and data plan prices and increasing utility of the Internet (Gnanasambandam et. al 2012). With the expansion of mobile network coverage, mobile connections in India grew at 21% in 2013. While 2G coverage was reported to be 90 percent, 3G built out had reached around 75 million mobile connections in 2013 (GSMA, 2014). The average

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retail price for a smart-phone in India decreased to 29 percent in 2013. Due in part of falling mobile prices, the smart-phone user base in India exploded from 5 million units in 2008 to 76 million units in 2013. While the falling prices have made a significant contribution to Internet penetration in India, relatively low data plans has also added to the contribution.

The e-commerce market has experienced the most growth in the past decade; while local retailers such as New India Plaza had an online presence as early as 1999; local online retail saw growth only after Flipkart launched in 2007. With the anticipated entry of foreign players such as Amazon in 2014, e-commerce is set to grow tremendously. The impact could be felt more in urban than rural areas; 50 percent of urban online Indian consumers cited online shopping as a main use of the Internet, a higher rate than that of India's rural population.

### *Objectives*

1. To study the prevalence of Internet use among adolescents.
2. To study the nature of Internet use in context of ,
  - a. Time participants spent online
  - b. Use of Social Networking Sites (SNS)

## METHODOLOGY

### *Sample*

The following study was aimed to find the prevalence of Internet usage among school going adolescents in the age group of 13-19 years in Vadodara district. The population included adolescents, having Internet access, from English medium schools and Gujarati medium schools affiliated to the Gujarat State Education Board (GSEB). For the sample selection, the Vadodara District Education Office was contacted and a list of all the English and Gujarati medium schools was sought. Of all the English and Gujarati medium schools affiliated to the Gujarat State Education Board (GSEB), seven schools were randomly selected through lottery method from the Vadodara city. Similarly, three schools were randomly selected through lottery method from the nearby towns in Vadodara district, viz., Padra, Dabhoi and Sinor. Out of these 10 schools, all the students of grades 9-12 were taken as the participants for the study. Therefore, a total of 1657 participants were the part of the study. Among them 834 were males and 823 were females. There were total of 517 participants studying in English medium schools and 1140 participants studying in the Gujarati medium schools. Of the total sample, 1204 participants belonged to the urban areas while, 453 participants belonged to the rural areas. Out of the total sample, 548 participants were from grade 9; 497 from grade 10; 319 from grade 11 and 293 from grade 12.

### *Tools*

1. **Internet Addiction Test (IAT), developed by Dr. Kimberly Young (1996)** consists of 20 items that measures mild, moderate and severe level of Internet use. IAT is a 20 item questionnaire on which respondents are asked to rate items on a five point Likert scale,

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covering the degree to which their Internet use affects their daily routine, social life, productivity, sleeping patterns and feelings. The minimum score is 20 and the maximum is 100; the higher the score, the greater the problem Internet use causes. Young suggests that a score of 20-39 points in an average user of the Internet who has complete control over his/her usage; a score of 40-69 signifies frequent problems due to Internet usage; and a score of 70-100 means that the Internet usage is causing significant problems.

- 2. A modified version of the European School Survey Project on Alcohol and Other Drugs (ESPAD) Questionnaire**, called *eu.net.adb*, developed by the Hibell, Guttormsson, Ahlström, Balakireva, Bjarnason, Kokkevi and Kraus (2011) and used in a project funded by the Safer Internet programme of the European Commission, was used for the present study. The questionnaire, eu.net.adb was a part of international study on Internet use among European students from seven different countries. The questionnaire contains total of 77 questions with various sub questions within each question. The questions are mostly related to the use of Internet, for what purpose the Internet is used by the participants.

### Procedure

Vadodara district is divided into 8 blocks/talukas, viz., Dabhoi, Karjan, Padra, Sinor, Savli, Waghodia, Vadodara rural and Vadodara city. Since, there is only one block which has the urban population, i.e., Vadodara city. it was separated by the researcher from the other 7 blocks which included the rural population. Out of these 7 blocks, the researcher randomly selected three blocks viz., Dabhoi, Padra and Sinor. School principals from the 10 selected schools were approached and permission was sought to collect the data on an assigned day.. The questionnaires were given to the all the students of Grades 9-12 who were present on the assigned day for data collection.

## RESULTS

**Table 1: Total frequency of Internet Users**

	Frequency	Percent
Below Average Users (BAU)	663	<b>40</b>
Average Users (AU)	743	<b>44.8</b>
Above Average Users (AAU)	242	<b>14.6</b>
Significantly Above Average Users (SAAU)	9	<b>0.5</b>
<b>Total</b>	<b>1657</b>	<b>99.9</b>

Table 1 describes the frequency of Internet users among the adolescents. As we see from the table, there are 40%% of the participants who are “Below Average Users (BAU)” of the Internet; 44.8% of them who are “Average Users (AU)” of the Internet, 14.6% of them are “Above Average Users (AAU)” of the Internet while only 0.5% of them are “Significantly Above Average Users (SAAU)” of the Internet.

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**Table 2: Gender difference in the use of Internet.**

	<b>Males</b>	<b>%</b>	<b>Females</b>	<b>%</b>
BAU	242	<b>29</b>	421	<b>51.1</b>
AU	429	<b>51.4</b>	314	<b>38.1</b>
AAU	154	<b>18.4</b>	88	<b>10.7</b>
SAAU	9	<b>1</b>	0	<b>0</b>
<b>Total</b>	<b>834</b>	<b>99.8</b>	<b>823</b>	<b>99.9</b>

Table 2 describes the frequency of Internet usage by male and female participants. Results indicate that there are 51.1% of females who are BAUs of the Internet use as compared to 29% of the males. Almost half of the male adolescents are Average Users (51.4%) as compared to their female counterparts which are 38.1%. Results also show that 18.4% of males are AAUs, while 10.7% of females are AAUs. Only 1% of the male population are significantly above average users of the Internet. This implies that males tend to use the Internet more as compared to their female counterparts. Male participants are almost twice as likely as the female participants to use the Internet.

**Table 3: Grade wise difference in the use of Internet.**

	<b>9<sup>th</sup></b>	<b>%</b>	<b>10<sup>th</sup></b>	<b>%</b>	<b>11<sup>th</sup></b>	<b>%</b>	<b>12<sup>th</sup></b>	<b>%</b>
BAU	216	<b>39.4</b>	198	<b>39.8</b>	138	<b>43.2</b>	111	<b>37.8</b>
AU	256	<b>46.7</b>	224	<b>45</b>	131	<b>41</b>	132	<b>45</b>
AAU	75	<b>13.6</b>	71	<b>14.2</b>	47	<b>14.7</b>	49	<b>16.7</b>
SAAU	1	<b>0.2</b>	4	<b>0.8</b>	3	<b>0.9</b>	1	<b>0.3</b>
<b>Total</b>	<b>548</b>	<b>99.9</b>	<b>497</b>	<b>99.8</b>	<b>319</b>	<b>99.8</b>	<b>293</b>	<b>99.8</b>

Table 3 describes the frequency of Internet usage by the participants studying in different grades. Results indicate that the highest number of participants belonging to the BAU category is from Grade 11 (43.2%), followed by Grade 10 and 9 (39.8% and 39.4% respectively) and the least being that of Grade 12 (37.8%). Talking about the “AU” category, highest number of participants belong to Grade 9 (46.7%), followed by Grade 10 and 12 (45% each) and the least of them belong to Grade 11 consisting of 41% of the total sample. Grade 12 participants (16.7%), reported being the highest users in the “AAU” category, followed by Grade 11 (14.7%), Grade 10 (14.2%) and Grade 9 (13.6%). Approximately 1% of the Grade 10 and 11 participants reported being SAAUs of the Internet.

**Table 4: Medium wise differences in the use of Internet.**

	<b>English Medium</b>	<b>%</b>	<b>Gujarati Medium</b>	<b>%</b>
BAU	135	<b>26.1</b>	528	<b>46.3</b>
AU	265	<b>51.2</b>	478	<b>41.9</b>
AAU	114	<b>22</b>	128	<b>11.2</b>
SAAU	3	<b>0.6</b>	6	<b>0.5</b>
<b>Total</b>	<b>517</b>	<b>99.9</b>	<b>1140</b>	<b>99.9</b>

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Table 4 shows the frequency of Internet usage by English and Gujarati medium participants. Results indicate that there are 26.1% of English medium participants who are “BAUs” as compared to 46.3% of the Gujarati medium participants. English medium participants are more of “AUs” and “AAUs” (51.2% and 22% respectively) as compared to Gujarati medium participants (41.9% and 11.2% respectively).

**Table 5: Area wise differences in the use of Internet.**

	Urban	%	Rural	%
BAU	458	38	205	45.2
AU	549	45.5	194	42.8
AAU	189	15.7	53	11.7
SAAU	8	0.6	1	0.2
<b>Total</b>	<b>1204</b>	<b>99.8</b>	<b>453</b>	<b>99.9</b>

Table 5 describes the use of Internet among participants residing in urban and rural areas of Vadodara city. Results indicate that there are 38% of urban participants who are “BAUs”, as compared to 45.2% of the rural participants. There are more urban participants who are “Average” and “Above Average Users” (45.5% and 15.7%, respectively) as compared to their rural counterparts, which are 42.8% and 11.7% respectively. This indicates that higher number of AUs and AAUs belong to the urban areas as compared to the rural areas.

**Table 6: Use of Social Networking Sites (SNS)**

Social Networking Sites	Total Users	%
Facebook	410	24.7
Twitter	648	39.1
Orkut	44	2.6
MySpace	36	2.1
Others, such as Hike, WeChat, Whats App, etc.	535	32.2

Table 6 shows the results of the total number of participants using a particular social networking site. The results indicate that out of the total of 1657 participants, 410 use Facebook, which is almost a quarter of them (24.7%) 648 use Twitter (39.1%), 44 of them use Orkut (2.6%), 36 use MySpace (2.1%) and 535 participants (32.2%) use other social networking and chatting apps such as WeChat, WhatsApp, Hike, etc through their mobile phones. Thus, we observe that Twitter, Facebook and other social networking sites accessed through mobile phones are among the most commonly used social networking sites.

## Prevalence and Nature of Internet Use among Adolescents in Vadodara (Gujarat)

**Table 7: Differences in the use of Social Networking Sites (SNS) by different categories of the Internet users.**

	BAU	%	AU	%	AAU	%	SAAU	%	Total	%
Facebook	64	<b>15.6</b>	236	<b>57.5</b>	104	<b>25.3</b>	6	1.4	410	<b>99.8</b>
Twitter	161	<b>24.8</b>	343	<b>52.9</b>	138	<b>21.2</b>	6	0.9	648	<b>99.8</b>
Orkut	12	<b>27.2</b>	22	<b>50</b>	9	<b>20.4</b>	1	2.2	44	<b>99.8</b>
MySpace	4	<b>11.1</b>	14	<b>38.9</b>	16	<b>44.5</b>	2	5.5	36	<b>100</b>
Others (WhatsApp, WeChat, etc.	152	<b>28.4</b>	285	<b>53.2</b>	93	<b>17.3</b>	5	0.9	535	<b>99.8</b>

Table 7 shows the difference among the three categories of Internet users and their use of a particular social networking site. The results depict that out of a total of 410 Facebook users, 15.6% of them are the BAUs, a little more than half (57.5%) of them are “AUs, while 25.3% of them are AAUs. Around 1.4% of the total users of Facebook are SAAUs. Similarly, for Twitter, we have 52.9% of the participants who are AUs, while 21.2% of them are the AAUS and 24.8% of the BAUs use Twitter. Comparing all the four types of users, we observe that AUs are in majority when it comes to using the social networking sites such as Facebook and Twitter, except that AAUs outnumber them in using MySpace (44.5%). The results show that more than half (53.2%) of the total AU participants access other social networking sites like Hike, WeChat, Whats App, etc. On the whole, we observe that among the all users of the Internet, Twitter, Facebook and other social networking sites and apps are more preferred.

**Table 8: Gender differences in the use of different SNS**

	Males	%	Female	%	Total	%
Facebook	272	<b>66.3</b>	138	<b>33.</b>	410	<b>99.9</b>
Twitter	431	<b>66.5</b>	217	<b>33.4</b>	648	<b>99.9</b>
Orkut	25	<b>56.8</b>	19	<b>43.1</b>	44	<b>99.9</b>
MySpace	29	<b>80.5</b>	7	<b>19.5</b>	36	<b>100</b>
Others	270	<b>50.4</b>	265	<b>49.5</b>	535	<b>99.9</b>

Table 8 describes the difference in the use of social networking sites by males and females. The results indicate that as many as 66.3% of the males use Facebook and 66.5% of them use Twitter, whereas only 33.6% and 33.4% of the females use these two SNS respectively. MySpace is also more common among the males and is used by 80.5% of the male participants as compared to 19.5% of the female participants. There is not much difference seen in the use of Other SNS by either of the participants. We observe that the males outnumber the females in using all the above mentioned sites that they engage into while socializing.



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**Table 9: Grade wise differences in the use of different SNS**

	9 <sup>th</sup>	%	10 <sup>th</sup>	%	11 <sup>th</sup>	%	12 <sup>th</sup>	%	Total	%
Facebook	92	<b>22.4</b>	134	<b>32.7</b>	93	<b>22.7</b>	91	<b>22.2</b>	410	<b>100</b>
Twitter	210	<b>32.4</b>	184	<b>28.4</b>	134	<b>20.6</b>	120	<b>18.5</b>	648	<b>99.9</b>
Orkut	16	<b>36.4</b>	17	<b>38.6</b>	3	<b>6.8</b>	8	<b>18.2</b>	44	<b>100</b>
MySpace	16	<b>44.4</b>	11	<b>30.5</b>	4	<b>11.1</b>	5	<b>13.8</b>	36	<b>99.8</b>
Others	134	<b>25.1</b>	186	<b>34.7</b>	114	<b>21.3</b>	101	<b>18.8</b>	535	<b>99.9</b>

Table 9 shows the differences in the use of SNS by participants studying in different grades. We observe from the results that 22.4% of Grade 9 participants, 32.7% of the Grade 10 participants, 22.7% of Grade 11 participants and 22.2% of Grade 12 participants use Facebook. Grade 9 participants are the highest users of Twitter (32.4%) as compared to Grade 10 (28.4%), Grade 11 (20.6%) and Grade 12 (18.5%) participants. The results also indicate that 44.4% of the Grade 9 participants are users of MySpace. Other SNS such as WhatsApp, WeChat, etc are used most by Grade 10 participants (34.7%), followed by Grade 9 (25.1%), Grade 11 (21.3%) and Grade 12 (18.8%). The general trend observed here is that Grades 9 and 10 participants use more of SNS as compared to Grades 11 and 12 participants.

**Table 10: Medium wise differences in the use of SNS**

	English	%	Gujarati	%	Total	%
Facebook	224	<b>54.6</b>	186	<b>45.4</b>	410	<b>100</b>
Twitter	215	<b>33.2</b>	433	<b>66.8</b>	648	<b>100</b>
Orkut	16	<b>36.4</b>	28	<b>63.6</b>	44	<b>100</b>
MySpace	10	<b>27.7</b>	26	<b>72.2</b>	36	<b>99.9</b>
Others	272	<b>50.8</b>	263	<b>49.1</b>	535	<b>99.9</b>

Table 10 shows the differences in the use of SNS by participants studying in English and Gujarati medium schools. Results indicate 54.6% of English medium participants and 45.4% of the Gujarati medium participants use Facebook. Twitter is used by 66.8% of the Gujarati medium participants and 33.2% of the English medium participants. Around 72.2% of the Gujarati medium participants use MySpace whereas, only 27.7% of the English medium participants use MySpace. Not much difference is seen among the English medium and Gujarati medium participants in terms of using other SNS (50.8% and 49.1% respectively).

**Table 11: Area wise differences in the use of SNS**

	Urban	%	Rural	%	Total	%
Facebook	355	<b>86.6</b>	55	<b>13.4</b>	410	<b>100</b>
Twitter	510	<b>78.7</b>	138	<b>21.2</b>	648	<b>99.9</b>
Orkut	35	<b>79.5</b>	9	<b>20.5</b>	44	<b>100</b>
MySpace	25	<b>69.5</b>	11	<b>30.5</b>	36	<b>100</b>
Others	449	<b>83.9</b>	86	<b>16</b>	535	<b>99.9</b>

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Table 11 shows the differences in the use of SNS by participants residing in urban and rural areas. The results indicate that as many as 86.65% of the urban participants and only 13.4% of the rural participants use Facebook. Second most used sites by the urban participants (83.9%) are the other SNS, while only 16% of the rural participants use the other SNS such as WhatsApp, WeChat, etc. The general observation here is that urban participants are frequent users of these social networking sites as compared to their rural counterparts.

**Table 12: Comparison among the amount of time spent on SNS during a normal school day and a weekend/holiday by different Internet users.**

	On a Normal School Day								On a Weekend/Holiday							
	BAU	%	AU	%	AAU	%	SAAU	%	BAU	%	AU	%	AAU	%	SAAU	%
A Few Minutes	278	41.9	184	24.7	28	11.5	1	11.1	189	28.5	60	8.1	7	2.9	0	0
Half an hour	112	16.9	224	30.1	47	19.4	0	0	135	20.3	139	18.7	14	5.7	1	11.1
1-2 hours	46	6.9	118	15.8	61	25.2	0	0	100	15	192	25.8	32	13.2	0	0
2-3 hours	5	0.7	41	5.5	34	14	2	22.2	46	7	98	13.2	35	14.4	0	0
3-4 hours	5	0.7	22	2.9	16	6.6	0	0	15	2.2	51	6.8	39	16.1	1	11.1
4 hours	24	3.6	41	5.5	18	7.4	3	33.3	2	0.3	29	3.9	23	9.5	0	0
More than 4 hours	1	0.1	6	0.8	10	4.1	2	22.2	19	2.8	66	8.9	63	26	7	77.7
Missing Responses	192	28.9	107	14.4	28	11.5	1	11.1	157	23.6	108	14.5	29	12	0	0
<b>Total</b>	663	99.7	743	99.7	242	99.7	9	99.9	663	99.7	743	99.9	242	99.8	9	99.9

Table 12 shows the amount of time participants spend on SNS during a normal school day as well on a weekend or on a holiday. The table shows that 41.9% of the BAUs use the SNS for only few minutes while, 24.7 % of the AUs spend few minutes, and 11.5% of the AAUs spend few minutes on SNS on a regular school day. The results indicate that participants tend to use SNS more during a holiday or weekend as compared to on a regular school day. 26% of the AAUs spend more than 4 hours on a holiday/weekend while only 4.1% of them spend so much time during the normal school day. Only 2.8% of the BAUs spend more than 4 hours on SNS during the weekend/Holiday. Results also indicate that 77.7% of the SAAUs use Facebook for more than 4 hours during a weekend/Holiday whereas only 22.2% of them do so for more than 4 hours during a regular school day.

## DISCUSSION

Based on the Young's Internet Addiction Test (IAT) criteria, the results of the present study show that 40% of the participants are Below Average Users (BAUs) of the Internet, a little less than half of the participants (44.8%) are Average Users (AUs) of the Internet, and 14.6% of the total participants are Above Average Users (AAUs) of the Internet. However, there are 0.5% of the total participants who are found to be Significantly Above Average Users (SAAUs) of the Internet. These results are in line with a similar kind of study done on 987 students in India (Goel, Subramanyam & Kamath, 2013), where it was found that, of the total participants, 74.5% of them were moderate users of the Internet, while 0.7% of them were found to be Internet

## **Prevalence and Nature of Internet Use among Adolescents in Vadodara (Gujarat)**

Addicts. A study on Professional courses students in Central India, reported 7.4% of their participants had moderate addiction to the Internet, while 0.3% had severe Internet addiction (Sharma, Sahu, Kasar & Sharma, 2014). Similarly, Chathoth, Kodavanji, Nayantara and Pai (2013), reported a prevalence of Internet addiction (comprising moderate and severe addiction) as 18.8% in undergraduate medical students in Mangalore. Nalwa and Anand (2003) investigated the extent of Internet addiction among school children in India. It was found that 18% of the participants were Internet addicts. Krishnamurthy and Chetlapalli (2015) in their study among college students in Bengaluru found prevalence of mild Internet addiction as 34% and that of moderate Internet addiction as 8%.

Various researches done abroad have found similar results which support the present study. For example, in a study on Prevalence of Internet use in Iran (Mazhari, 2012), it was found that out of 976 University students, 21% of them were High users of the Internet. Other previous researches on university students show the prevalence rate of Internet use to be 26.1% in the United States (Christakis, Moreno, Jelenchick, Myaing & Zhou, 2011), 10.6% in China (Wu & Zhu, 2004), 17.9% in Taiwan (Chou & Hsiao, 2000) and 34.7% in Greece (Frangos, Frangos & Sotiropoulos, 2011).

India is a fast growing developing nation and the latest technology never hesitates in making its way in to the Indian society. We observe that most of the students now own a cell phone which was a luxury a decade back. With the introduction of new technology from the developed nations, the rise in the prevalence rate of Internet users has also increased in India.

It was hypothesized that there will be significant difference in the Internet use by male and female adolescents. The results of the present study confirmed the hypothesis. It is seen that females are more of a low or average users of the Internet as compared to males who are more of a high users in terms of Internet use. These findings corroborates with previous studies stating that High use of Internet/ Internet addiction is more common in males than in females (Niemz, Griffiths & Banyard, 2005; Anderson, 2001; Chou & Hsiao, 2000; Griffiths, 1998).

The Internet and the Social Networking Sites (SNS) have become an integral component of many adolescents' development and life these days. There are a vast number of SNS available for individuals to choose from with multiple factors influencing the decision to use of a particular SNS. In a national survey carried out in the USA in 2009 it was found that 73% of the teenagers use Social Networking Sites (Lenhart, Purcell, Smith & Zickuhr, 2010). Similarly, Gibson, Arnott, Moncur, Martin, Forbes & Bhachu (2010) found that the use of SNS is most common amongst young people, with 95% of those under the age of 30. The report states that 'visiting SNS' is the second most common activity done several times a day after 'surfing the net'. Almost a quarter of the participants checked their Facebook several times a day according to this report.

### Prevalence and Nature of Internet Use among Adolescents in Vadodara (Gujarat)

These findings corroborates with the present study where it was found that Facebook, Twitter and other SNS like WhatsApp, Hike, etc, have emerged out as the most commonly used social networking sites among the adolescents. More than half of the Average users access these SNS, while around a quarter of the Above Average users use Facebook daily. Hargittai's (2007) study of 18- and 19-year old students showed that as many as 74% of the participants reported using at least one social networking site (from the list of six which included: Facebook, MySpace, Xanga, Friendster, Orkut and Bebo) with Facebook being the most frequently used site.

During the past decade, India has witnessed a remarkable advancement in the field of Information and technology (IT), which has led to the emergence of SNS. Social Networking Sites like facebook, Orkut, MySpace, etc are becoming more and more popular and has becoming a part of daily life for an increasing number of people (Jain, 2013). SNS provide a virtual life to the Indian students. Students who are not comfortable speaking in front of anyone feel free in their virtual world. When they use social networking websites they feel like in heaven but this addiction kills their inner self confidence and imagination for life time (Kavita, 2015).

There have been numerous studies as to why adolescents use social networking sites. For example, Schmitt, Dayanim and Mattias (2008), are of the opinion that children in early adolescence may be spurred to create personal online homepages due to the development of mastery motivation (one's ability to accomplish a goal, such as online content creation), a key developmental challenge for children aged 6-12 years. While adolescents are developing their self identity in this stage of their life, the Internet provides them with this space where in they can discover their identities and experience with them. These adolescents are able to experiment through making personal blogs and homepages, which are mostly public, and are a self representation on the Internet. These websites act as a tool by which adolescents identity can be explored and personal information can be easily shared.

Also, identity exploration may not be the only reason for these adolescent to get hooked on to the SNS. Factors like social communication and social enhancement may as well contribute to the use of SNS. Zywicki and Danowski (2008) defined popularity on social networking sites such as Facebook through indicators like number of friends or the amount of wall posts an individual may have. Social networking sites popularity may hold different meanings for people with differing levels of self-esteem and sociability. An analysis of college students' use and perception of popularity on Facebook was used to look at the hypotheses of *social enhancement*, in which those who have well developed offline social networks have larger online social networks, and *social compensation*, in which those with less adequate offline social networks compensate for that lack by having more online social networks (Zywicki & Danowski, 2008). Since adolescents at this stage are experimenting intensely with new relationships, they look for comrades or a group of friends where they can feel a sense of belongingness. The Internet, and SNS in particular, serve the dual purpose of anonymity and the need for belongingness.

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It has also been observed from the results of the present study that males use SNS more than the females. Males are twice as likely to use Facebook and Twitter (16.4% and 26% respectively) as compared to females (8.3% and 13% respectively). Similar findings were also observed by Lenhart (2015), where it was found that boys are more likely than girls to visit Facebook most often (45% of boys vs. 36% of girls). Girls are more likely than boys to use Instagram (23% of girls vs. 17% of boys) and Tumblr (6% of girls compared with less than 1% of boys). Studies have revealed that while females use social networking mainly to maintain and find old relationships, males usually take help of the social media to make new relationships (Mazman & Usluel, 2011).

The results also indicate that participants of English medium schools are higher users of the SNS as compared to their Gujarati medium counterparts. Also, the present study found that urban users are more as compared to the rural users for various SNS. Probable explanation for this difference may be the fact that there is more awareness of various SNSs among the urban population. Also the availability of new and advanced technology that offers easy access to urban population than to the rural population. With poor mobile networks, and the latest technology taking its time to reach the rural parts, these adolescents are a bit regressed in terms of their usage of Internet as well as SNS.

## **CONCLUSION**

India is a developing country with embracing technological advancements at a growing pace. Teens today are hooked onto their mobile phones and laptop, doing numerous things on the Internet. The results show that though Internet addiction is in its initial phase in Indian adolescents, as compared to their western counterparts, it won't be a long time that this addiction would increase within a couple of years. Results also show that adolescents use a lot of social networking sites and are deprived of real face to face friendships and relationships. The role of Internet in our lives is beyond doubts and its usage is only going to increase in future. The real challenge for adolescents and their care takers is to have control on the time spent on the Internet and social networking sites. Parents need to explain to their children the pros and cons of the Internet, and to balance their time between Internet surfing, other physical activities and studying.

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## **Efficacy of Personality Development Program on Self-Efficacy of College Students**

Dr. Chitra T<sup>1\*</sup>

### **ABSTRACT**

Universities and Colleges are nowadays implementing soft skills training program apart from imparting core subject knowledge, to improve the Employability skills of their students. Classroom misfortunes, conflicts with peers, and failures in love can make college a breeding ground for self-esteem issues, which ultimately affects their academic performance and well-being. Self-efficacy has emerged as a highly effective predictor of students' motivation and learning (Zimmerman, 2008). Personality development is a potential intervention tool which helps an individual to gain confidence and improved self-efficacy. Personality Development is just not outer physical looks, but it also includes grooming one's inner self to bring about a positive change in one's life. The present study examined the impact of personality development training program on self-efficacy of 150 male (N=58) and female (N=86) post graduate college students. The study also evaluated the training program, by administering quantitative feedback about the program after the completion of the program. The study used one group Pre-test, Post-test research method. The age group of the sample ranged from 19-23 years and they were all single. They belonged to both Science and Arts stream. The sample was assessed on their self-efficacy by using General Self-Efficacy scale by Schwarzer & Jerusalem (1995). Data were collected at 2 time periods i.e. before the training and a week after completion of training. The personality development program with relevant modules was conducted by trained psychologist over a period of continuous 15 weeks (one 2 hour session/week). 150 students participated in 5 batches for the personality development program. 6 students did not fill the questionnaire properly, hence deleted from the research. The 144 data were statistically analyzed using Percentage analysis, t-test, and qualitative analysis. The results showed that the personality development program improved the self-efficacy among college students. Moreover, the intervention did not have any impact on gender and stream of education of college students. However, the results may only be indicative, as there is no control group in the present study. Overall, the Personality development program was found to be effective in improving self-efficacy of students and was well received by them.

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The real purpose of the education is to equip students with the potential to meet both personal and professional challenges in life. One of the outcomes of education is to satisfy the employment needs of employers and graduates. Graduates seek to obtain rewarding employment opportunities and employers pursue suitable new work force from the pool of graduates to fill job openings. Employers recruit new employees based on competencies both in technical and nontechnical or soft skills. Technical skills, which are also referred to as hard skills, are defined by Litecky, Arnett, & Prabhakar (2004) as “those skills acquired through training and education or learned on the job and are specific to each work setting”. The term soft skills, used interchangeably with nontechnical skills, is defined as the “interpersonal, human, people or behavioural skills needed to apply technical skills and knowledge in the workplace” (De Villiers, 2010).

However, a long-standing complaint of employers as well as the managers, is that the newcomers i.e. students fresh out of college/universities lack soft skills and are unemployable (Dharmarajan, Pachigalla, & Lanka, 2012; Williams, 2015). The disparity in the goals of the education system and the expectations of employers contribute to the gaps that are evident in the students or graduates’ poor performances at interviews and work experience opportunities (Williams, 2015). Meeting the soft skills needs of the workforce must be of concern to educators and employers. To fill this gap, many Universities and Colleges are nowadays providing soft skills programs with the objective of equipping graduates with the necessary soft skills. One of the soft skills courses offered by Psychology department, University of Madras is ‘Personality Development’ course.

Even though colleges may believe that they are using effective approaches to develop and reinforce soft skills, if they are not consistently assessed and part of a feedback loop to the student and institution, the skills gap and the perception gap are likely to go unaddressed. Soft skills (Personality development) program has become an increasingly common method to skill development. However, very few empirical studies have tested its capacity to generate outcomes. To address this lacuna, an attempt was made to evaluate the efficacy of the ‘Personality Development’ program, in improving the general self-efficacy of students. Generalized self-efficacy was chosen as the outcome variable as it was found relevant to the study undertaken. Classroom misfortunes, conflicts with peers, and failures in love can make college a breeding ground for self-esteem issues, which ultimately affects their academic performance and well-being. Self-efficacy beliefs have been found to be sensitive to subtle changes in students’ performance context, to interact with self-regulated learning processes, and to mediate students’ academic achievement. Social-cognitive theory and its central variable, self-efficacy, have been the focus of a voluminous amount of research in psychology. Self-efficacy, per Bandura (1999), is a mechanism of personal agency consisting of individual’s beliefs regarding performance

capabilities in a domain. In this sense, self-efficacy can be defined as being a prospective competence-based variable that predicts action (Bandura, 1999). More specifically, perceived self-efficacy represents an optimistic sense of personal competence accounting for motivation and performance in multiple life domains (Scholz, Gutiérrez-Doña, Sud, & Schwarzer, 2002). In fact, previous studies have consistently found a significant and positive correlation between perceived self-efficacy and successful performance (Beefink, Van Eerde, Rutte, & Bertrand, 2012; Hughes, Galbraith, & White, 2011).

Pinquart, Juang, and Silbereisen (2003) showed that self-efficacy beliefs were associated with low unemployment and high job satisfaction in early adulthood. Personality development is a potential intervention tool which helps an individual to gain confidence and improved self-efficacy (Nebhinani et al., 2015).

*In this regard, the present study attempted to,*

1. To find out the effect of Personality development program on self-efficacy of postgraduates in Arts and Science education stream.
2. To evaluate the personality development program.

## METHODOLOGY

### *Participants and Procedure*

The study was conducted among 150 male and female postgraduates belonging to Arts and Science stream who underwent Personality Development program, offered by Psychology Department in University of Madras, Chennai City. The study was approved by the concerned authorities. 'One group Pre-test, Post-test' research method was adopted for the present study. The study also evaluated the training program, by administering quantitative and qualitative feedback about the program after the completion of the program. A total of 150 students (Male – 58 and Female – 86; Arts – 61 and Science - 83) and who belonged to 5 different batches participated in the research after getting their informed consent. Out of which, 144 data were only appropriate for analysis due to incomplete information.

Data were collected at 2 time periods i.e. before the training and a week after completion of training.

### *Tools*

The tools used for the study was General Self-Efficacy by Schwarzer, R., & Jerusalem, M (1995) to measure self-efficacy of students. Other relevant data like age, gender, and course taken, were also collected. Intervention was evaluated through 'partially open ended anonymous structured feedback'. Close-ended questions regarding program evaluation and 6 open-ended questions pertaining to how the program influenced the lives of participants were collected. The test-retest reliability value for the Self-efficacy scale was .76 and Cronbach-alpha was 0.85.

### ***Intervention***

The personality development program with relevant modules designed by the Department of Psychology was conducted over a period of continuous 15 weeks (one 2-hour session/week). Training was given by researcher who is a psychologist and a well-trained professional with ample experience in the field of psycho-social training. The protocol followed was,

1. Pre-assessment
2. Implementation of the intervention (Personality development program)
3. Post-assessment

The major components of the program were,

1. About personality development
2. Self-awareness (SWOT & Johari Window)
3. Self-esteem
4. Positive Attitude
5. Motivation & Goal-setting
6. Social skills & Presentation skills
7. Communication & Interpersonal skills
8. Management of emotions
9. Stress Management

The intervention used experiential learning and was proactive and eclectic. Practice of skills between sessions was encouraged. Psycho education, role play, team activity & games, modeling, self-monitoring of responses, assignments, case studies, story-telling, and image-guided relaxation techniques were used as the modes of training.

### ***Data Analysis***

Statistical Package for Social Sciences (SPSS-Version 17) was used to conduct data analysis. Relevant checks like scale of measurement, normality of distribution, and test of homogeneity of variance were made. The homogeneity of demographic variables (Gender and Education Stream) during pre-test was also tested. Descriptive statistics were applied to the data and the data were analyzed using Percentage analysis, t-test, and qualitative analysis. The responses of the participants were made as a transcript sorted by question and summarized by the researcher. Comments by the participants were evaluated using best practices to divide the comments into positive, neutral, or negative categories.

## **RESULTS**

The scores of the sample in the present study were normally distributed. The homogeneity of demographic variables namely gender and stream of education, was established during pre-test. The age of the participants ranged from 20-25 and all were single (not married).

## Efficacy of Personality Development Program on Self-Efficacy of College Students

Table 1 shows the effect of personality development program on self-efficacy of college students. The Table shows that the post-test self-efficacy scores were significantly higher compared to the pre-test self-efficacy scores.

**Table 1 Effect of Personality Development Program on Self-efficacy of College Students (N=144)**

SN	Pre-test	Post-test	Mean Difference	Standard Error	df	t
1	29.76 ± 4.14	32.79 ± 3.80	3.01	0.35	1.43	8.37 **

\*\*  $p < 0.01$

Table 2 shows the effect of personality development program on gender and educational stream of college students. The Table shows that intervention did not have any impact on gender and stream of education of college students.

**Table 2 Effect of Personality Development Program on Gender and Stream of Education of College Students (N=144)**

SN	Variable	n	Post-test	Mean Difference	Standard Error	df	t
Gender							
1	Male	58	33.43 ± 3.85	1.07	0.64	57	1.66 NS
2	Female	86	32.36 ± 3.73			85	
Stream of Education							
1	Science	83	32.54 ± 3.60	1.07	0.64	82	0.91 NS
2	Arts	61	33.13 ± 4.06			60	

NS – Not Significant

Table 3 shows the evaluation of the intervention.

**Table 3 Evaluation of Personality Development Program (N=144)**

SN	Items	M ± SD	Strongly agree (%)	Agree (%)
1.	I will be able to apply the knowledge learned	4.74 ± 0.45	74	26
2.	The training objectives for each topic were identified and followed	4.89 ± 0.32	89	11
3.	The content was organized and easy to follow	4.89 ± 0.32	89	11
4.	The materials distributed were pertinent and useful	4.96 ± 0.19	96	4
5.	The trainer was knowledgeable	4.83 ± 0.33	97	3
6.	The quality of instruction was good	4.93 ± 0.27	93	7
7.	Class participation and interaction were encouraged	4.85 ± 0.36	85	15
8.	Adequate time was provided for questions and discussion	4.85 ± 0.36	87	13

## DISCUSSION

Many surveys have proven that employers find a high percentage of college graduates unprepared for the workplace (Dharmarajan et al., (2012), Williams (2015). They often complain that fresh graduates and postgraduates lack the soft skills needed for success in the workplace. In response, several employability programs have begun to incorporate soft skills training, but to date there has been little evidence as to the effectiveness of such programs. In the present study, Personality development program was found to be effective in improving the self-efficacy of college students. This is in line with the previous study where Direito, Pereira & Duarte (2012) found that self-efficacy is promoted by soft skills development, and it is fundamental to competent performance.

On analyzing the responses to a questionnaire on evaluating the personality development program, it was found that clear majority of the participants strongly agreed to all aspects pertaining to the quality of the training programs such as content, training objective, materials used, knowledge of trainer, quality of instruction, class participation, time given for question and discussion and about applying the knowledge learned from the sessions. This indicated that participants had favorable attitude towards various aspects of the training program. The qualitative feedback collected a week after the training program was found to be overwhelmingly positive. Comments by the participants were evaluated using best practices to divide the comments into positive, neutral, or negative categories. Of the 140 feedback forms returned, all were judged to be very positive in their comments and very meaningful, pertaining to its use in their daily lives. Many participants specifically detailed significant changes in their academic and personal lives which they attributed to the training.

Nebhinani et al., (2015) also conducted a similar study among medical and nursing students and reported that majority of the medical as well as nursing students found personality development program relevant, comprehensive and useful. Majority had perceived some improvement in their confidence, interpersonal relationships, time schedule, emotional regulation, and stress management. Greater proportion of students appreciated interactive activities and trainer's approach. Their contents of the training program are also similar to the present program.

The study also found that gender and educational stream did not have any influence on the effectiveness of the training program. This indicates that irrespective of whichever stream (Arts/Science) students belong to, the effectiveness of the program was same. Similarly, whichever gender they belonged to, the effectiveness of the program was still the same. This implies that the program can be used across gender and educational streams. However, the results may only be indicative, as there is no control group in the present study. Overall, the Personality development program was found to be effective in improving self-efficacy of students and was well received by them.

## CONCLUSION

The present study substantiated the effectiveness of personality development program on self-efficacy of college students. A strength of the current study is that it used qualitative approach along with standardized outcome measure to efficacy of personality development program. The present study used self-report survey data which has inherent limitations. However, data were collected by the investigator after direct interaction with the sample. In view of lack of available literature on personality development, we could not compare the present findings. Therefore, generalizability of our findings needs caution and replication in wider population samples. Conversely, future investigations can include other outcome measures like interpersonal skills, work ethics, emotional intelligence, communication skills etc. The present study has implications like using the training program across engineering and medicine streams also to improve their beliefs to taking up challenges in life and work. Further, it is recommended to use this program to be part of curriculum for all graduates to improve one's belief in one's ability to succeed in tasks and life's challenges.

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## Attitudes toward Inclusive Education among School Teachers: A Comparative Study

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### ABSTRACT

Inclusive education in India has recently received a momentum. A willingness on the part of Teachers to support all children in the mainstream classroom; including with special needs is the hallmark of inclusive education. Thus teacher's attitudes toward inclusive education play a pivotal role in its success. In this way, the present study is an attempt to assess and compare the attitudes of mainstream and special education school teachers towards inclusive education. A purposive sample of 300 regular school teachers consisting of 150 teachers from mainstream and 150 teachers from special schools of Delhi-NCR (Noida, Ghaziabad, Delhi, Faridabad) of both male and female aged 24-45 yrs was drawn for research purpose. Attitudes toward Inclusive Education Scale (ATIES) developed by Wilczenski, F.L (1992), containing 16 items was used to measure their attitudes toward inclusive education. Descriptive and inferential statistics (t-test) were used to assess and compare the attitudes of teachers of mainstream and those of special school. The results indicated that teachers of mainstream school have more favourable attitudes than those of special schools, which may be one of the major causes of slow success of this system in India.

**Keywords:** *Inclusive education, Mainstream school teachers, Special school teachers, Attitudes*

The world is changing at a dizzying pace and things are no longer what they used to be earlier. Every child irrespective of the disability has a right to education in an institution, where the normal children used to get. As per census of India (2011), the percentage of disabled person in India has increased both in rural and urban areas. Out of the total population 2.1 % persons are suffering from disability, out of which 1.14% (0-4 yrs), 1.54% (5-9yrs) and 1.82% (10-19yrs) are disabled children. In such a prevailing pathetic situation, the launching of inclusive education scheme is just to promote opportunities for all children to participate, learn and have equal

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treatment irrespective of their mental /physical disabilities. The main aim of such scheme is to eradicate the negative stereotypes towards special educational needs children.

The principle of inclusive education was first adopted at world conference on “ Special Needs Education: Access and Quality” which was held in Salamanca ,Spain (1994).It was further strengthen at the world education forum (Dakar,2000) ,however a decade ago a census has emerged among Indian intellectuals and pedagogies for adopting inclusive education in mainstream schools. However owing to lack of up-to-date knowledge, educational access and technology, disabled children in India were treated as unwanted and hence segregated from other children, so they received and are still receiving their education in special schools. However in recent times, there has been a tremendous shift towards having children with disabilities to carry out their studies in the same school where the normal children used to receive. It is not only the alternative measure for children with special needs for wants of separate special schools for these children, rather than it is psychologically well thought strategy for their holistic development. The Indian government continued to include the children with special needs under several of their education initiatives including the Sarva Shiksha Abhiyan ( SSA,2001)and the National Curriculum Frame Work(NCF,2005).NCF(2005) has emphasized upon the implementation of policy of inclusion throughout the educational systems in the country. It focused upon the acceptance of responsibility to extra care of children with special needs, while removing various types of barriers such as physical, social, emotional and attitudinal etc. They further emphasized that work, learn and play together should be the motto of each educational institution in India. Team work consisting of teachers, parents and students irrespective of their disability should be appraised and strengthened .Further till date focus is given on equality of quality of education to be imparted to each child. (Millennium development goals,2015).There are the several national and local NGO's that champion the cause of children with disabilities and provide specific resource centers in support of inclusive education. The general philosophy behind the start of such education system is to empower and develop free of guilt and inferiority complex among children with special needs owing to healthy relationship fostered among such children, teacher & non disabled children. The present education system has been re-engineered to respond to the pupil's diversity and acknowledges the responsiveness to the diverse needs of all children .Such system is no longer defined as a placement but as a system of support provided to help & address the needs of a subset of students [Stainback & Stainback ,1996] ,who fosters a sense of belongingness with other normal children .Thus the main goal of inclusive education is to break down the barriers ,which separate general & special education & to inculcate the feelings among disable students as an active member of the general education classroom.

The awareness about inclusive education in schools in India is still at infancy stage .The success of such education of students with special educational needs has been a big challenge for the administrators, who are skeptical about imparting education to both normal & disable children in

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the same class room. They are facing many challenges such as preparedness of teachers for inclusive education, imparting of training to teachers to handle successfully such students, lack of flexibility in the course curriculum, classroom size, bullying of such children, and need of extra attention from the teacher to such children & consequently promoting an environment, where personal development, social skills & students' participation to be strongly encouraged. All above mentioned issues related to inclusive education have been explored by the researchers. There are plethora of studies ,which have found unfavourable attitudes of teachers towards inclusive education. (Glaubman & Lifshitz,2001; Mushoriwa, 2001; Singh & Alur 2001; Tesfaye, 2005; Alghazo & Gaad, 2004;Singal,2006 b;Chhabra, Srivastava & Srivastava,2010;). The negative attitude of teachers toward inclusive education may be attributed to teacher's lack of skill, fear of handling such students. On the contrary there is a wealth of literature ,which focused upon the favourable attitudes of teachers towards inclusive education ( Beltran, 1995 ; Forlin, 1995 ; Padeliadu,et al.,1997; Croll & Moses, 2000 ; Johnson, 2001;Tesfye,2005 ; Whyte, 2005 ; Ali, Mustapha & Jelas, 2006 ; Hodkinson,2006 ; Forlin & Sharma, 2007 ;Khan, 2007). Almost all these studies have revealed the fact that positive attitude towards inclusive education depends upon teacher's efficacy, experience, training, adequate flexibility in course curriculum and type of disability, class size i.e. appropriate setting along with optimum teacher student ratio i.e. 6:1 etc. Though the journey towards Inclusive education in India has begun yet its speed is too slow to be implemented in every corner of the country. For its successful implementation there is an utmost need to explore the attitudes of teachers toward inclusive education because they are key service providers in handling such students. So the present researcher has attempted to select the research problem to highlight and compare the mainstream and special school teacher's attitudes toward inclusive education. After selecting the research problem, the following objective was taken into consideration.

### ***Objective***

- To assess and compare the attitudes of mainstream and special school teachers toward inclusive education.

### ***Hypothesis***

On the basis of above objective following hypothesis was formulated:

- There would be a significant difference in the attitudes of mainstream and special education school teachers toward inclusive education.

### ***Sample***

A purposive sample of 300 primary and secondary school teachers (150 from mainstream, and 150 from special school ) both male and female was taken from Delhi NCR (Noida,Ghaziabad, Delhi, Faridabad) with the following inclusion and exclusion criteria:

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### ***Inclusion criteria***

1. Special school having students of physical, behavioural and social disabilities.
2. Male and Female teachers.
3. Teachers from government and private schools at primary and secondary level.

### ***Exclusion criteria***

1. The teacher who himself/herself is disabled would be avoided.
2. Teachers on contract or daily wages would be avoided.

### ***Tool***

In the present study the following tool was used:

**Attitudes toward Inclusive Education Scale (ATIES by Wilczenski, F.L 1992):** It contains 16 items .It was designed to elicit teachers' attitudes toward the inclusion of students with various disabilities into regular classrooms. This 16-item scale measures teacher's attitudes toward four aspects of inclusive education: social, physical, academic and behavioral. Participants rate their responses on a likert scale (1=strongly disagree, 6=strongly agree).The scores range from 16 to 96, with a lower score indicating a less favorable attitude and a higher score scale indicates a most favorable attitude.Wilczenski analyzed the reliability of the ATIES scale and reported a Cronbach's Alpha value of 0.92 (Kuyini & Desai,2007).

### ***Procedure***

First of all the consent from teachers of both mainstream and special schools were taken. The rapport was established with teachers and questionnaire was administered after giving relevant instructions. Scoring was done as per norms of the questionnaire.

## **RESULTS AND DISCUSSION**

The main aim of the study was to assess and compare the attitudes of mainstream and special school teachers toward inclusive education.

***Table 1: Descriptive statistics (Mean & S.D) of the scores obtained on the attitudes (overall) toward inclusive education amongst school teachers.***

S.No.	Group(category of teachers)	mean	S.D	Possible range scores
1.	Mainstream school teachers	65.5333	5.88898	16-96
2.	Special school teachers	57.8000	5.96297	

The Table 1 indicates that the teachers of mainstream school scored quite higher than those of special school, which revealed that teachers of mainstream school are having more favorable attitudes (overall) toward inclusive education than those of special school teachers.

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In order to find out the statistical significant difference of mainstream and special school teacher's and attitudes toward inclusive education, t-test was computed and has been shown in Table 2.

**Table 2: t-value of scores obtained on attitudes toward inclusive education of mainstream vs special school teachers.**

S.No.	Group(category of teachers)	Mean	SED	df	t
1.	Mainstream school teachers	65.5333	.48083	298	11.301**
2.	Special school teachers	57.8000	.48687		

\*\* p<.001

Table2: clearly shows the significant difference ( $t=11.301$ ,  $p<.001$ ) in overall attitudes toward inclusive education of mainstream teachers with those of special school. In this way hypothesis which stated "There would be a significant difference in the attitudes of mainstream and special education school teachers toward inclusive education "is verified. The reason of more positive attitudes of mainstream school teachers than those of special school may be attributed to have a very limited knowledge of inclusive education and ignorant about the problems, actually faced while handling the children with special needs. Theoretically on the surface level, the scheme of inclusive education appears to be very appealing, which no doubt decreases the negative stereotype towards the education of special children. Another reason may be attributed to teacher's perception of self efficacy, which may have a significant impact of their ability to accept the challenges inherent in including disable children with normal students.

Further the positive attitudes of such teachers toward inclusive education may be explained on the basis of the principle of instrumental conditioning, where their favourable attitudes ,toward inclusive education are approved or encouraged by the concerned authorities, such thinking patterns are internalized by them, hence are expressed time & again. As per social learning theorists due to observational learning, where teachers of the same school appreciate the scheme of inclusive education they also follow their perspective. Further on the basis of functionalist theory, it may be inferred that they showed favourable attitudes because it increases social welfare benefits & expressed their basic values, which positively reinforced their self image. In this way attitudes serve to protect them from acknowledging harsh realities of life & hence attitude act as defense mechanism. Further as per reasoned action theory, their favorable attitudes may be explained on the basis of their subjective norms, which are based on the evaluation & strength of a belief regarding inclusive education. In other words their subjective norms are contingent upon their normative belief (i.e. thinking based on what others expect from them) & motivation to comply (which depends upon the importance given by others towards an

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issue).The present findings are in line with those of early findings which also examined favourable attitudes of teachers toward inclusive education.(Beltran,1995 ;Forlin, 1995;Padeliadu,et al.,1997; Croll, et al.,2000; Johnson,2001; Tesfye,2005 ;Whyte,2005; Ali,,et al.,2006; Hodkinson,2006; Forlin ,et al., 2007 ;Khan, 2007).

The less favorable attitudes of teacher of the special school education may be due to their “powerful negative effect of experience “with children with special needs (Self perception theory). Further the formation of less favorable attitudes toward inclusive education may be explained on the basis of classical conditioning paradigm, where teaching and handling of the children with special need led to the development of fear about the successful interaction and relationship with them. Further such attitude may be due to inconsistency between attitude and behavior, which may have caused tension (Cognitive Dissonance Theory). It may be due to lack of appropriate training to handle such children, large class size, lack of flexibility in curriculum and lack of resources etc. The present findings are in line with those of previous studies which reported unfavourable attitudes of teachers toward inclusive education.(Beltron,1995; Soodak, Podell, Lehman, 1998; croll et al.,2000;Singh & Alur, 2001; Kristensen,Onen & Loican ,2003 ;Gaad,2004; Tesfye,2005; Ali et al.,2006; Chhabra et al.,2010;Forlin et al.,2007; Srivastava, 2010).

After exploring and comparing the overall attitudes of mainstream and special school teachers toward children with various disabilities, the depth analysis was also carried out to explore their attitudes (overall) toward children with various disabilities separately. Descriptive as well as inferential statistics were computed and have been shown in Table 3.

**Table No.3: Mean, SD and t-values of the scores obtained on attitude towards children with various disabilities.**

S.No.	Group (Category of school teachers)	Attitudes toward the type of disability	Mean	SD	SED	df	t
1.	MSST	SOCIAL	19.313	2.4690	.2016		
2.	SST	SOCIAL	12.833	2.3557	.1923	298	23.257 **
3.	MSST	PHYSICAL	13.500	3.2081	.2619		
4.	SST	PHYSICAL	17.067	2.6789	.2187	288.815*	10.451 **
5.	MSST	ACADEMIC	15.773	3.7059	.3026	274.86*	1.398 NS
6.	SST	ACADEMIC	15.247	2.7489	.2244		
7.	MSST	BEHAVIORAL	17.113	2.6408	.2156	298	16.069 **
8.	SST	BEHAVIORAL	12.600	2.2043	.1800		

**\*\*P<.001**

MSST : Mainstream school teachers, SST : Special school teachers

\*df (288.815, 274.86) have been taken because of highly significant value of F.

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From Table 3, it is clearly revealed that attitudes of mainstream school teachers differed significantly towards children with social ( $t$ - value 23.257,  $P < .001$ ), physical ( $t$ - value 10.451,  $P < .001$ ) and behavioral ( $t$ -value 16.069,  $P < .001$ ) disabilities from those of special school. In other words teachers of main stream schools have more favorable attitudes toward such children (social, physical and behavioral disabilities) than those of special school, the reason may be that in special school the teachers used to deal with such children in their schools and might have to face so many problems. However insignificant difference ( $t=1.398$ ) in attitudes with regard to children with academic disability was found. It may be rather easy to handle mild mentally retarded children than children with social, physical and behavioral disabilities.

### CONCLUSION

To sum up it may be stated that mainstream school teachers have more (overall) favorable attitudes toward children with various disabilities (physical, social and behavioral except academic) than the teachers of special school. However both groups have similar favorable attitudes toward children with academic disability revealing the fact that it may be rather easy to handle mentally retarded children than children with physical, social and behavioural disabilities. The present findings have highlighted the reason (i.e. less favourable attitudes of special school teachers) of slow progress in implementation of inclusive education in India. Hence there is a dire need to change the attitudes of teachers, who used to deal with such children, with adequate training, providing of proper resources, adequate classroom size and flexible curriculum.

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## Association of Personality Traits with Oral Health Status: A Cross-Sectional Study

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### ABSTRACT

**Background**-Gingivitis is inflammation of gingival. The most common cause of gingivitis is poor oral hygiene. Personality is the combination of characteristics or qualities that form an individual's distinctive character. The oral health of the people may be affected by different personality characters. The aim of the study was to assess the impact of the personality traits on oral hygiene performance and gingival health in dental OPD patients. **Objectives**-To assess the relationship between different personality traits with oral hygiene index score, gingival index score, plaque index score, oral hygiene practice, other habits, dental visits, income groups, education. **Materials and Methods**- In total 620 subjects of Department of Periodontology from Swargiya Dadasaheb Kalmegh Smruti dental College and Hospital, Nagpur India were selected for the study. The personality characters were assessed by using the Eysenck Personality Questionnaire Revised Short-form (EPQRS). Based on this questionnaire, the subjects were divided in to three subgroups Extroversion, Neuroticism and Psychoticism. **Result**-It was found that Simplified Oral Hygiene Index, Plaque Index Gingival Index was more in person with neuroticism type of personality. **Conclusion** -The findings of the present study suggested that there exist no co relation between various personality traits and associated oral health status. However further trials should be conducted in future to validate the present findings.

**Keywords:** *Gingivitis, Personality, EPQRS, Extroversion, Neuroticism, Pscychoticism*

Personality is the combination of characteristics or qualities that form an individual's distinctive character. The term "personality trait" refers to enduring personal characteristics that are revealed in a particular pattern of behavior in a variety of situations. The nature of personality traits can be

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seen as individual predilections to show constant arrays of opinions, frame of mind, and activities. Simple tendencies are highly analytical over time, exert impact on actions, and can be used to predict future behavior. Personality has to do with individual differences among people in behavior patterns, cognition and emotion.

The study of personality started by the Greek physician Hippocrates. He developed Temperament theory into medical theory which has roots in the ancient four humors theory (460-370 BC). He believed that personality is made of body fluids (humors): Blood, Yellow Bile, Black Bile and Phlegm. The explanation was further developed by his successor Galen during the second century CE. Many Researchers greatly shaped our modern theories of temperament. Hans Eysenck (1916–1997) was one of the first psychologists to analyze personality differences using a psycho-statistical method (factor analysis), and his research led him to believe that temperament is biologically based and consists of Extroversion, Psychoticism, Neuroticism personality component. Gordon Allport was an early pioneer in the study of traits. In 1990, J.M. Digman advanced five-factor model of personality, which was extended by Lewis Goldberg. They considered personality is broken into components called the Big Five, which are openness to experience, conscientiousness, extroversion, agreeableness, and neuroticism (or emotionality). According to Eysenck, these components are generally stable over time, and about half of the variance appears to be attributable to a person's genetics rather than the effects of one's environment.

Different personality characteristics of people may affect the oral health. Although collective impact of social, behavioral, cultural, lifestyle, educational and economic factors have also been concerned in determining influence of personality characteristics on oral health status. It is considered that the age, gender, smoking habits, anxiety, stress, depression in everyday life, self-liking was positively related to the oral health behaviour. Thomson et al suggested that personality may be related to the oral health as it increases risk of oral disease and alters the individuals' attitude towards the disease.

In the field of dentistry several studies have demonstrated a relationship between Quality of Life and patient personality. Van Waas et al. described a relationship between patient satisfaction and psychological factors in wearers of complete dentures. Kressin et al. concluded that negative affectivity, which is a general disposition to experience subjective distress, was significantly associated with Oral Hygiene Related Quality Of Life ratings in a study of older men. Another study found that different personality component may influence dental perceptions and play a significant role in shaping satisfaction with dentition in younger people.

Brief cognitive interventions can alter the attitudes and values tapped into by personality traits, which might be useful in preventive dentistry. The number of environmental, physical and psychological factors has the potential to alter the gingival tissues and host immune responses

resulting in more severe periodontal disease expression. Also there is impact of overall personality of an individual on person's oral hygiene condition. Hence, the present study was done to assess the impact of this personality trait on oral hygiene performance and gingival health.

## **MATERIALS AND METHODS**

### ***Participants***

This study was approved by the institutional ethical committee Swargiya Dadasaheb Kalmegh Smruti Dental College and Hospital, Nagpur India. Total 620 outpatients visiting to the Department of Periodontology from January 2016 to March 2016 were invited to participate in the present study. The inclusion criteria were 1) Minimum age of 18 years of both the genders 2) Minimum 20 permanent teeth.(with at least index teeth for indices) 3) subjects who are not under professionally monitored plaque control program. The exclusion criteria were subjects having any 1) systemic illness Patients with a history of a systemic condition or medication use that might influence the gingival condition were excluded (i.e. patients with a history of diabetes mellitus, thyroid diseases, chronic renal problems 2) subjects under steroids, NSAIDS, antibiotics etc.3) Pregnancy 4) Subjects who have not answered the complete questionnaire 5) Mentally retarded subjects.

A total of 1200 subjects visited to the Periodontology Department OPD during the study period. Of these, 900 subjects met the inclusion criteria 620 subjects were agreed to participate in the study. (The Sample size of 620 subjects was obtained by the formula  $n = 4pq/L^2$  where  $p$ =population proportion to positive character,  $q=1-p$  and  $L$ = allowable error.), 95% confidence level and 90% power reference value.)

### ***Data Collection***

After the informed consent had been obtained eligible subjects provided the designed proforma. In the proforma questionnaire sought of information Name, Age, Sex, Dental visits, Oral hygiene Habit-Brushing aid and frequency, other habits, Income groups (National council Of Applied Economical Research), Education were obtained. Subjects were assured that their answers would be held strictly confidential to encourage complete and truthful self-reporting. In the clinical examination OHI-S index, Plaque Index, gingival Index was recorded to evaluate oral hygiene and gingival status of the subject. Plaque was recorded using an index developed by Silness and Loe 1964, Simplified Oral Hygiene Simplex index by Greene and Vermillion 1964. The full mouth gingival index (GI) of Loe and Silness 1963 was used to record gingival inflammation around the entire dentition (excluding 3rd molars)

### ***Personality assessment***

The personality characters were assessed by using the Eysenck Personality Questionnaire Revised Short-form (EPQR-S; Eysenck et al ,1985). EPQR-S is self-reported questionnaire each

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question has binary response- 'yes', 'no'. For complete understanding and better response, questionnaire was provided in English-Hindi language. Each dichotomous item will be scored maximum '1' and minimum '0' possible score. EPQR-S includes 48 items and 4 subscales: Extroversion (E-12 items), Neuroticism (N-12 items), Psychotics P-12 items) and Lie (L-12 items). As an individual can have more than one personality trait, based on this models, the subjects who scored above average expressed greater forte of that particular factor and to be considered into that personality trait. Accordingly subjects were divided into three groups: P, E, and N, respectively. For reliability of the answers given, a Lie scale was performed. Those who scored more than the average score in lie scale were excluded from the study. Lie scales were originally introduced into personality measures in order to detect the "faking good" of scores on other scales (O'Donovan, 1969). According to Eysenck and Eysenck (1976) the lie scale included in the Eysenck Personality Questionnaire allows lying to be diagnosed when a set of rarely performed acts are permitted by the respondent as being habitually done and when frequently performed non-desirable acts are denied by the respondent.

Extroversion (E) describes the personality as Sociable, Impulsive, Like excitements, Sensation seeking, Cheerful, Self-confident, Enthusiastic and Active person with high Extraversion are energetic, talkative, social, and dominant whereas, person with low Extraversion tend to be soft, peaceful, reserved, and passive to other. Neuroticism (N) refers to the personality with Emotional instability, Impulsiveness or possessiveness, Excessive panic, anxiety, Low self-respect, overly sentiments, Feeling of guilt, Depression, Irritability, Tension, shyness. According to Eysenck's (1967) theory of personality, neuroticism is interlinked with low tolerance for stress or aversive stimuli. Those who score high in neuroticism are emotionally sensitive and susceptible to stress. They are more likely to take ordinary situations as threatening and minor frustrations as miserably challenging and they are often in a bad mood.

Psychoticism (P) personalities are non-conformist, tough minded, willing to take risks, Unconcerned about the rights and welfare of others, may engage in antisocial behaviors and liking odd and unusual things.

### *Statistical Analysis*

The data was analysed with the help of M.S. Excel and Epi-info software version 7.1.1.14. Chi – square test was applied and p value of < 0.05 was considered to be significant.

## **RESULTS**

620 subjects were given the questionnaire, and explained to those who were not understood the questions. After lie scale 40 subjects were excluded from the study. So the final sample size was 580 subjects. Due to multiple personality in the subject; total 636 personality traits were calculated. In relation to 636 personality traits clinical and other parameter were statistically analyzed. 178 personalities of mean age 35.23 years were belonged to Psychoticism, among

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them 117 male and 61 female. In Neuroticism total 229 personalities were involved of mean age 35.56 years, 134 were male and 95 were female. 229 personalities, 134 male and 95 female of mean age 33.85 years were belonged to Extroversion. (As shown in table -1)

Most of the personalities who had never visit the dental clinic were belong to extroversion and Neuroticism group. Most of the personalities were brush their teeth once a day with toothbrush-toothpaste. Most of The personalities had habit of chewing tobacco.

The personalities in group Extroversion and Neuroticism were from lower middle and middle income groups. It was found that Simplified Oral Hygiene Index, Plaque Index Gingival Index was more in person with neuroticism type of personality

**Table 1: The mean age and gender in all groups**

PERSONALITY	Mean Age (Years)	Males (%)	Females (%)	Total (%)
P	35.23	117(30.06)	61(24.73)	178 (27.96)
N	35.65	134(34.96)	95 (37.63)	229 (36.01)
E	33.85	134 (34.96)	95 (37.63)	229 (36.01)
Total		385 (60.59)	251 (39.40)	636 (100)

**Table 2: Association of Personality traits with various dental factors**

Factors	P (%)	E (%)	N (%)	X <sup>2</sup>	P value
<b>Dental Visits</b>					
Once	28.79	24.71	23.53	1.28	0.97
more than twice	13.64	10.59	14.12		
Never	27.97	36.01	36.01		
<b>Brushing Frequency</b>					
Once	60.61	58.82	65.88	1.37	0.967
Twice	30.30	32.94	28.24		
Thrice	9.09	8.24	5.88		
<b>Brushing Aid</b>					
Toothbrush+ Toothpaste	71.21	64.71	69.41	2.86	0.83
Toothbrush+Toothpowder	12.12	17.65	15.29		
Other	16.67	17.65	15.29		
<b>Habits</b>					
Tabacco	25.53	31.91	42.55	2.086	0.554
Pan	26.08	39.13	34.78		
Smoking	22.22	38.88	38.88		
Alcohol	28.57	35.71	35.71		
<b>Income Group</b>					
Low	22.22	33.33	44.44	7.73	0.81
Lower Middle	27.39	38.35	34.24		

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Factors	P (%)	E (%)	N (%)	X <sup>2</sup>	P value
Middle	30.13	35.61	34.24		
Upper Middle	30	36	34		
High	23.07	30.76	46.15		
<b>Education</b>					
Illiterate	3.03	2.35	4.71	8.09	0.78
Upto Secondary School	18.18	23.53	25.88		
Below Secondary School	40.91	43.53	42.35		
Graduate	36.36	27.06	25.88		
Post- Graduate	1.52	3.53	1.18		
<b>OHI-S</b>					
Good	33.34	33.33	33.33	4.08	0.67
Fair	23.91	41.30	34.78		
Poor	28.88	32.22	38.88		
<b>Plaque Index</b>					
Excellent	32.25	38.70	29.03	7.29	0.61
Good	31.66	33.33	35.00		
Fair	25.64	39.31	35.04		
Poor	25.00	25.00	50.00		
<b>Gingival Index</b>					
Mild	36.36	30.90	32.72	10.18	0.11
Moderate	27.86	38.52	33.60		
Severe	20.33	35.59	44.06		

## DISCUSSION

Gingivitis is a non-destructive periodontal disease that causes irritation, redness and swelling of the gingival and if not controlled, it can progress to periodontitis, where the inflammation results in tissue destruction and alveolar bone resorption, which can ultimately lead to tooth morbidity.

The different personality instruments have been designed to examine, different personalities in individual and their differences in emotional and behavioral style. Personality tests/scale scan be a useful tool to articulate the characteristic about personality in individual also it help to describe the personality. Few scales are –Hardiness Scale, Courtauld Emotional control scale, Subjective scale of perceived social support, Multidimensional scale of perceived support (MSPSS), Life event scale etc.

Since the advance of Eysenck personality theory, various measures were developed in order to assess the various personality traits. The early Maudsley Medical Questionnaire(MMQ) contains 40 items (Eysenck ,1952), Maudsley Personality Inventory (MPI) contains 48 items (Eysenck ,1959),The Eysenck personality Inventory (EPI) contains 57 items (Eysenck and Eysenck 1964),The Eysenck personality questionnaire (EPQ) contains 90 items (Eysenck and Eysenck 1975)and the revised Eysenck Personality questionnaire (EPQR) contains 100 items

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(Eysenck, Eysenck and Barrett, 1985), Eysenck Personality Questionnaire Revised Short form (EPQRS) contains 48 items (Eysenck 1985).

While determining different personality traits, even among all questionnaires were reliable and applicable; however there is some practical disadvantages in using long tests. due to the length of sentence-based and some lexical measures, short forms of personality questionnaire have been developed and validated for use in applied research settings where questionnaire space and respondent time are limited such as EPQR-S (48 items). Now it been used widely. **Trambek Tiwari** et al 2009 suggested that EPQR-S is a reliable scale for the measurement of various personality traits. However some research suggested that because of its insufficient length it fails to provide adequate detail to evaluate personality.

In the present study Plaque index, OHI-S index were used assess the oral hygiene performance and Gingival index were employed to assess the influence of personality traits on gingival health. Research into the association between personality and Oral health has shown at least three processes to be involved. First, the individual with dominant aggressive personality character shows poor oral health because of bruxism. Second, individuals who are low on constraint might be more likely to smoke it may predispose to poor oral health and ultimately leads to periodontitis. Third, highly stressful individual might tend to interpret oral symptoms as being more disastrous than would their low-scoring in stress character.

**Capsi A. et al 2005** indicated that individuals who scores highly on Psychoticism scale are more aggressive which predisposes poor oral health as most of them having habit of Bruxism. And subjects who scores low in Extroversion are more likely to smoke which affects the periodontium leading to Periodontitis. Although it was long assumed that personality traits remain stable and unchanging, longitudinal research has documented that personality can and does change markedly, probably because of life experiences and lessons encountered in young adulthood.

In the present study it was observed that as there is certain association is present between personalities with oral hygiene and gingival health but no statistically significant difference exists amongst the traits (P, E,N) in relation to Simplified oral hygiene index, Gingival index, plaque index also with oral hygiene practice, other habits, dental visits, income groups, education .This finding is similar in relation gingival health to the **Rajesh K.S.et al 2013** who Observed no statistically significant relation between personality traits and gingival health status of the subjects .However it was observed that use of tobacco was more and brushing frequency was less in certain personality.<sup>16</sup>The study by Thomson et al 2011 aimed to describe the association between personality characteristics and self-reported oral health in a longstanding cohort study. It has found a consistent association between negative emotionality and poorer self-



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reported oral health, whether measured using a sophisticated scale or a single-item global measures.

Nikias et al. (1977) stated that when the Economic status was controlled for, lower educational level appeared, in their sample, to be related to poor oral hygiene, tooth loss, and periodontal disease Paulandar et al 2003 concluded that Educational level was shown to influence the oral conditions and should be considered in assessing risk, and in planning appropriate preventive measures.

As far the author knowledge this study is the first to observe the parameters such Education, Income, HI-S, Plaque index in association with different personalities. As it was seen that these factors could be a possible confounding factor in association with the study.

### CONCLUSION

The findings of the present study suggested that there exist no co relation between various personality traits and associated oral health status. However further trials should be conducted in future to validate the present findings.

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### Questionnaire

- |  |          |
|--|----------|
| 1) Does your mood often go up and down?  | Yes / No |
| 2) Do you take much notice of what people think?   |          |
| 3) Are you a talkative person?   |          |
| 4) If you say you will do something, do you always keep your promise no matter how inconvenient it might be? |          |
| 5) Do you ever feel just miserable for no reason?  |          |
| 6) Would being in debt worry you?  |          |
| 7) Are you rather lively?  |          |
| 8) Were you ever greedy by helping yourself to more than you share of anything?                              |          |
| 9) Are you an irritable person?  |          |
| 10) Would you take drugs which may have strange are dangerous effects?                                       |          |
| 11) Do you enjoy meeting new people?   |          |

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- 12) Have you every blamed someone for doing something you knew was really fault?
- 13) Are you filings easily hurt?
- 14) Do you prefer to go your own way rather than act by the rules?
- 15) Can you usually let yourself go and enjoy yourself at lively party?
- 16) Are all your habits good and desirable ones?
- 17) Do you often feel fed-up?
- 18) Do good manners and cleanliness matter much to you?
- 19) Do you usually take the initiative in making new friends?
- 20) Have you ever taken anything (even a pin or button) that belonged to someone else?
- 21) Would you call yourself a nervous person?
- 22) Do you think marriage is old –fashioned and should be done away with?
- 23) Can you easily get some life into a rather dull party?
- 24) Have you ever broken or lost something belonging to someone else?
- 25) Are you a worrier?
- 26) Do you enjoy co – operating with other?
- 27) Do you tend to keep in the background on social occasions?
- 28) Dose it worry you if you know there are mistakes in your work?
- 29) Have you ever said anything bad or nasty about anyone?
- 30) Would you call yourself tense or highly strung?
- 31) Do you think people spend too much time safeguarding their future with saving and insurance?
- 32) Do you like mixing with people?
- 33) As a child were you every cheeky to your parents?
- 34) Do you worry too long after an embarrassing experience?
- 35) Do you try not be rude to people?
- 36) Do you like plenty of bustle and excitement around you?
- 37) Have you ever cheated at a game?
- 38) Do you suffer from nerves?
- 39) Would you like other people to be afraid of you?
- 40) Have you ever taken advantage of someone?
- 41) Are you mostly quiet when you are with other people?
- 42) Do you often feel lonely?
- 43) Is it better to follow society's rules than go your own way?
- 44) Do other people think of you as being very lively?
- 45) Do you always practice what you preach?
- 46) Are you often troubled about feeling of guilt?
- 47) Do you sometimes put off until tomorrow what you ought to do today?
- 48) Can you get a party going?

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### **Scoring Key for EPQR-S**

- For items-2,6,8,12,18,20,24,26,27,28,29,33,35,37,40,41,43 and 47 Yes=0
- For items 1,3,4,7,9,10,11,13,14,15,16,17,19,21,22,23,25,30,31,32,34,36,38,39,42,44,45,46,48 Yes=1
- Neuroticism-1,5,9,13,17,21,25,30,34,38,42,46
- Extroversion-3,7,11,15,19,23,27,32,36,41,44
- Psychoticism-2,6,10,14,18,22,26,28,31,35,39,43
- Lie-4,8,12,16,20,24,29,33,37,40,45,47.

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## Does Gender Affect Well-Being of Elderly?

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### ABSTRACT

Gender plays a magical role in each and every sphere of life. We are living in a patriarchic society, where gender disparity still exists; this disparity is visible not only before birth, but still goes on till death. Despite inevitable biological differences with regard to gender, certain other factors appeared to be gender specific as far as even well-being is concerned. Research literature has shown that even elderly are not spared with these speculations. Thus the present researchers have decided to explore the impact of gender on the subjective well-being of old people. A purposive sample of 75 elderly in which 45 were male and 30 were female with the age range of 60-80 years, was drawn from Rohtak city, Haryana. For measuring their subjective well-being Sell and Nagpal's scale of subjective well-being was used. In order to find out the statistical significant difference in overall subjective well-being and its various dimensions t-test were calculated. The significant value of t indicated that both groups differed on their overall subjective well-being, where male superseded female. Further positive well-being, ill-being and various domains of subjective well-being have been discussed in detailed in the paper. The gender disparity even at this stage of life suggests that society still needs gender sensitization and cognitive restructuring regarding gender.

**Keywords:** *Gender, Geriatrics, Subjective well-being, Gender sensitization and Cognitive Restructuring*

Growing old is natural is natural part of one's life. Old people provide a precious often ignored resource that makes an important contribution to the psycho-socio fabric of our lives. They are the intermediaries between the past, present and the future. So their well-being is a matter of great concern for the researchers, policy makers because of this segment of population is rising very high in India. Well-being is a state of successful performance throughout the life course which includes strength in physical, cognitive and socio-emotional functioning as well as the successful integration of these three domain function (Bornstein, Davidson, Keyes, & Moore, 2003). The two concepts of well-being are usually referred to as hedonic and eudemonic (Ryan

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& Deci, 2001., Ryff, Singer & Love, 2004). Hedonic well-being refers to feeling good, whereas eudemonic well-being refers to good life i.e. meaningful honorable or realistic (Henderson & Knight, 2012).

Subjective well-being is defined as optimal psychological functioning that refers to subjective evaluation of happiness pleasant versus unpleasant experiences & it includes all judgments of good & bad elements of life (Ryan & Deci, 2001). According to Diener (1984), there are 3 basic characteristics of subjective well-being: it is subjective and depends on experiences, it includes positive affects and absence of negative aspects & it refers to subjective evaluation of all aspects of individual's life. Thus it includes two components cognitive evaluation of satisfaction with life (Pavot, Diener, Colvin & Sandrik, 1991).

Gender plays a key role in affecting subjective well-being even at the last phase of life. There is rich controversial empirical evidence which supports that gender plays a key role in affective subjective well-being of old people (Tech-Romer, Motel-Klingebiel, & Tomasik, 2008; Oshio, 2012; Meisenberg & Woodley, 2015). On the contrary there are some evidences which support that gender is unable to produce its affect on subjective well-being of geriatrics. (Diener & Biswas-Diener, 2002; Diener, Suh, Lucas & Smith, 1999; Pavot & Diener, 2004; The reason for the controversial findings may be attributed to the participants belonging to the different culture, with such ambiguous inference the present researchers decided to explore the impact of gender on the subjective well-being of elderly people of Haryana. The following problem was selected for the current research work.

### ***Problem***

- To assess and compare the subjective well-being of male and female of elderly. On the basis of above problem the following objectives were formulated.

### ***Objectives***

- To find out and compare the level of subjective well-being of male- female elderly.

### ***Design***

Two group designs were used in the current research work.

## **METHODOLOGY**

### ***Sample***

A Purposive sample of 75 elderly in which 30 were females and 45 were males with the age range of 60-80 years, was drawn from Rohtak city, Haryana. With the following inclusion and exclusion criteria.

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### *Inclusion*

1. Both husband and wife alive.
2. Both living together with children.
3. Middle strata of society.
4. No major illness.

### *Exclusion*

1. Divorce/Widow/Widower.
2. Major illness such as Paralytic attack, Alzheimer disease, Parkinson disease etc.

### *Tools*

**Subjective well-being Inventory (SUBI)** (Sell and Nagpal, 1992). This is a very comprehensive is robust instrument (originally in English) for assessing positive indicators of health including perception of well-being, happiness, life satisfaction, positive affect & feelings about social life. The SUBI has standardized on Indian adult population. It consists of 40 items that assess subjective well-being of the subjects on 11 factorial dimensions.

1. **General Well-being affect:** This factor refers to feeling of wellbeing deriving out of an overall perception of life which a respondent evaluates as functioning smoothly and joyfully.
2. **Expectation Achievement Congruence:** The item on this factor reflects feeling of well-being generating by achieving success and the standard of living as per one's expectation or what may be called satisfaction.
3. **Confidence in Coping:** This factor refers to one's perceived personality strength. It reflects one's ability to master critical or unexpected situation and his/her ability to adapt to life changes and to face difficulties and adversities without breakdown.
4. **Transcendence:** This factor refers to feeling of wellbeing derived out of values of a higher spiritual quality and one's particular life experiences which go beyond ordinary day to day material and rational existence.
5. **Family Group Support:** This factor refers to feeling of wellbeing derived from the perception of the wide family when the respondent finds it as cohesive, supportive, helpful in illnesses and emotionally attached.
6. **Social Support:** This factor measures feelings of security and density of social networks.
7. **Primary Group Concern:** This factor measures positive and negative feelings about primary family.
8. **Inadequate Mental Mastery:** This factor assesses subject's sense of insufficient control over or inability to deal efficiently with some day to day aspect of life. If not handled properly, these aspects might disturb the mental balance. This adequate mastery disturbs or reduces wellbeing.
9. **Perceived Ill –Health:** The items on this factor refer to complaints regarding health and physical fitness

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**10. Deficiency in social contacts:** This factor assesses whether a respondent experiences lack of or deficiency in social relations and contact through worries about being disliked and feelings of missing friends.

**11. General Well-Being–Negative Affect:** This factor measures whether a subject possesses depressed outlook of life.

A Hindi translation of SUBI by Sharma (2000) was used in present study. The pearson product moment correlation between original English and translated version was.86 and test-retest reliability was.80.

### *Procedure*

Each participant was contacted individually and was clearly informed about the purpose of study. After establishing the rapport with them, the relevant instructions related to scale was given to them. When the subject was comfortable and ready for filling the proforma was given and asked to answer each and every items of the scale. Further scoring was done as per norms and data were subjected to suitable statistical analysis.

## RESULTS AND DISCUSSION

In order to find out the significant difference in overall subjective well-being and its various domains of male and female elderly descriptive as well as inferential statistics were computed and have been shown in Table1.

**Table1: Descriptive and inferential statistics of scores obtained on subjective well-being and its various domains of male and female of elderly.**

Subjective well being & its various domains	Gender	Mean	Standard deviation (sd)	t
Overall subjective	F	88.90	13.11	2.62**
Well being	M	96.33	11.27	
Overall positive	F	44.53	6.91	1.43
Well-being	M	46.57	5.39	
Overall negative	F	44.36	8.36	2.90**
well-being	M	49.77	7.55	
General well- being	F	6.80	1.64	1.42
positive affect	M	7.28	1.30	
Expectation-Achievement	F	6.93	1.43	1.58
incongruence	M	7.44	1.32	



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Confidence in coping	F	7.00	1.57	1.50
	M	7.53	1.44	
Transcendence	F	7.06	1.17	.00
	M	7.06	1.19	
Family group support	F	7.63	1.92	.85
	M	7.95	1.36	
Social support	F	6.43	2.06	.56
	M	6.71	2.09	
Primary group concern	F	6.40	1.69	3.92**
	M	7.73	1.25	
Inadequate mental mastery	F	14.66	3.60	.28
	M	14.91	3.54	
Perceived ill health	F	12.00	3.28	3.18**
	M	14.35	3.04	
Deficiency in social contacts	F	6.63	1.95	1.60
	M	7.28	1.56	
General well-being negative affect	F	7.20	1.68	2.65**
	M	8.02	.92	

**\*\* $P < .001$**

While observing Table1, it is quite evident that male scored more means score (mean score=96.33) than their female counterparts (mean=88.90) which indicates that males overall subjective well-being is more than females. It is further supported by the significant t value ( $t=2.62, p<.001$ ). The reason may be attributed to males overall more wellness to spouse support, and being more active socially than females. Whereas elderly females get happiness more through emotional support from their children rather than from their spouse. The present findings are in line with those Tech-Romer, Motel-klingebiel, & Tomasik, 2008; Oshio, 2012, Meisenberg, & Woodley,. However there are some studies. (Diener & Biswas-Diener,2002; Diener, Suh, Lucas & Smith,1999; Pavot & Diener,2004)didn't find any significant difference in subjective well-being of male-female elderly. This may be due to difference in culture. We are living in a collectivist culture where patriarchal values dominant. Hence people even at this last phase of life are in grip of gender; where still male dominates.

## Does Gender Affect Well-Being of Elderly?

After findings the significant difference in overall subjective well being, its various domains were also analyzed. Table further reveals that in the domains of overall negative affect (ill-being), primary group concern and perceived ill health both groups differ significantly. In other words more ill-being is being observed in elderly females in comparison to male's elderly. Further females are found to be having less well-being as far as the domain of concern for primary group is focused. It reveals that female is more bothered about the issues of their family than their male counterparts. Again females have been found to have more perceived ill health in comparison to male elderly.

While observing Table it is seem that both groups didn't differ significantly in the various domains of subjective well-being such as overall positive effect, Expectation- achievement incongruence, confidence in coping, transcendence, family group support, inadequate mental mastery, deficiency in social contacts all these that both male and female elderly have almost equal level of positivity, similar level of coping, same social group support and spirituality etc. whereas the impact of gender appears to be disappearing.

### CONCLUSION

It may be stated that gender segregation as far as subjective well-being is concerned is visible even at the last phase of life. Males are found to be having high level of subjective well-being in comparison to females, however in some domains, they were found to be at par.

### Suggestions

The present findings endorse some suggestions that still there is a need in the society to make people sensitize about gender disparity.

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## An Unusual Case of Phobia: Hodophobia

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### ABSTRACT

Phobia to situation and objects is a common presentation of anxiety disorders. The DSM- IV TR (Diagnostic and statistical manual of mental disorders (4th ed., text rev.) includes distinct types of phobias. We report an unusual case of hodophobia which has been successfully treated with combination of pharmacotherapy and systematic desensitization. Since phobia of travelling impacts person's professional life, early treatment and awareness is required.

**Keywords:** *Phobia: Hodophobia, Systematic desensitization*

Anxiety is a condition marked by excessive worry and feelings of fear, dread, and uneasiness. It includes various disorders such as panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder, phobias, generalized anxiety disorder. In phobia, anxiety is evoked only, or predominantly by a certain well-defined situation or objects (external to the individual) which are not currently dangerous. Such situations or objects are avoided or endured with dread. The individuals concern may focus on individual symptoms such as palpitations or feeling faint and is often associated with secondary fears of dying, losing control, or going mad. Mere contemplation of entry to the phobic situation usually generates anticipatory anxiety. The DSM-IV-TR includes distinctive types of specific phobia: animal type, natural environment type (e.g., storms), blood-injection-injury type, situational type (e.g., cars), and other type (for specific phobias that do not fit into the previous four types). Hodophobia is the fear of travel. People fear travel because of the unpleasant feeling of being in unfamiliar places far away from homes. As with other phobias, people with hodophobia experience an intense fear at the thought of traveling. Physical symptoms often include sweating, shaking, stomach aches, diarrhea, headaches or shortness of breath. They may have mild symptoms or may experience panic attacks.

*We report an unusual case of hodophobia.*

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### **CASE SUMMARY**

Mrs. M 36 year old female has come to psychiatry outpatient department with 6 month history of experiencing fear of travelling. Significant symptoms include fear of not getting help, headaches, cold sweats, and nervousness along with negative automatic thoughts like: what if I panic, I may not handle it. This leads avoiding any form of travelling. In the beginning, she was unable to travel to places within city due to intense anxiety symptoms. She started avoiding traveling alone. Patient had no history of any substance abuse and neither had past or family history of psychiatric illness. Systemic examination including central nervous system was normal. She was diagnosed as a case of hodophobia. Patient had a past history of hypothyroidism 3 years back for which she was treated with thyroxine 50µg/day for about 2 years. A panel of other tests including Complete Blood Count Liver Function Tests, Renal Function Tests, Thyroid function tests, Serum vitamin B12, MRI brain (plain), were found to be normal.

Patient was treated with escitalopram 10 mg per day and Clonazepam 0.5 mg twice a day. Patient was also treated with behaviour interventions such as Jacobson's Progressive Muscle Relaxation (JPMR) and graded exposure for travelling as a part of systematic desensitization. During treatment, hospital anxiety depression scale (HADS) score severity was reduced from base line score of 16; 17 to 3; 7 for depression and anxiety respectively. After 3 months of treatment she is able to travel inside city without having any panic attacks.

### **DISCUSSION**

Anxiety, panic attacks, depression, obsessive compulsion disorders and phobias are commonly associated with thyroid dysfunction. In our case, patient's thyroid profile was normal at time of presentation and she was not taking any thyroxine supplementation since last 1 year. Other disorders like generalized anxiety disorder, agoraphobia, depression and obsessive compulsive disorder have been ruled out, since symptoms of hodophobia specifically include fear and anxiety associated with travelling. We treated our patient with in vivo systematic desensitization along and antianxiety medications. Systematic desensitization is found to be effective in fear related to specific objects or situations, e.g. phobias. Systematic desensitization was developed by Wolpe during 1950. In this therapy, therapist desensitizes patient gradually in graded manner based on fear hierarchy to the phobic stimuli along with muscle relaxation and breathing exercises to deal with anxiety. Even researchers have found that in vivo techniques more successful than in vitro.

### **CONCLUSION**

Hodophobia is not a common form of specific phobia. Organic causes to be rule out before treating with psychological interventions. Hence, a multidisciplinary approach is required in comprehensive treatment of specific phobias. Since phobia of travelling impacts people's professional life, early detection and awareness is required.

## An Unusual Case of Phobia: Hodophobia

### *Acknowledgments*

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## Job Satisfaction and Occupational Stress among Permanent and Temporary School Teachers

Dr. Tribhuvan Sunil Laxman<sup>1\*</sup>

### ABSTRACT

**Aim of the Study:** 1. To search the job satisfaction among permanent and temporary school teachers. 2. To examine the occupational stress among permanent and temporary school teachers. 3. To find out the negative correlation found between job satisfaction and occupational stress among school teachers. **Hypotheses:** 1. there is no significant difference between among permanent and temporary school teachers dimension on job satisfaction. 2. There is no significant difference between among permanent and temporary school teachers dimension on occupational stress. 3. There is negative correlation between job satisfaction and occupational stress among school teachers. **Sample:** Total 120 school teachers were selected. Among them 60 among permanent school teachers and 60 among temporary school teachers. The age range of school teachers were 20 to 30 years ( $M = 26.45$ ,  $SD = 5.78$ ). Non-probability purposive sampling was used. **Tools** 1. Teacher Job Satisfaction Questionnaire (TJSQ): (1996) this scale was constructed and standardized by Dr. Pramod Kumar and D. N. Mutha. Occupational Stress Index (OSI): This scale was constructed and standardize by Dr. A. K. Srivastava and A. P. Singh. **Variable: Independent variable:** Type of School Teacher a) among permanent b) temporary. **Dependent Variable:** 1. Job Satisfaction 2. Occupational Stress **Conclusion:** 1. permanent school teachers found significantly high job satisfaction than the temporary school teachers. 2. Temporary school teachers found significantly high occupational stress than the temporary school teachers. 3. There is negative correlation found between job satisfaction and occupational stress among school teachers.

**Keywords:** Job Satisfaction, Occupational Stress, Permanent and Temporary School Teachers

Teachers are an essential link in the transmission of educational opportunity to poor children. Teacher job satisfaction has, in turn, been tied to teachers' work performance, including teachers' involvement, commitment, and motivation on the job. Teacher job dissatisfaction is closely associated with teacher absenteeism and a tendency toward attrition from the teaching

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profession. Teacher commitment may also be an important factor determining the successful implementation of educational reforms in schools. In China, the current era of educational reforms aims to bring about a shift toward more student-centered teaching and learning, a greater emphasis on critical thinking and the application of skills, and the establishment of a more democratic classroom environment. The implementation of these reforms will likely require greater levels of teacher initiative and innovation, making teacher commitment and motivation increasingly important. Disengaged teachers are unlikely to inspire student engagement or, consequently, student achievement.

According to Locke (1969) job satisfaction has been defined as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". Satisfaction with various aspects of occupational stress experiences as difficult to characterize with other forms of everyday experiences (Cook et. al. 1981). For example, job satisfaction among teachers in higher secondary level schools, where students principal, typically have closed working relationships with their teachers may be influenced by the teachers' assessment of top management. Job satisfaction is an emotional relation to an employee's work condition. Job satisfaction is defined to be an overall impression about one's one job in terms of specific aspects of the job (work, pay promotion, co-workers, job in general). Job satisfaction also an extension over a staff member has favorable or positive feeling about work or the work environment (De Nobile 2003). It refers to the employee reactions towards their work experiences (Berry 1997) and work situations in the organizations (Wood, Wood and Boyd 2007). Smilansky (1984) observed teachers' work satisfaction and revealed that teachers' general satisfaction and stress at work were related mostly to their reported feelings about happening within class (such as relations with pupils, the process of teaching, and pupil behaviour in school) rather than to administrative or policy questions (such as degree of work autonomy, relations with principals).

Despite the fact that high-quality teachers are more difficult to recruit and retain in rural communities, there has been little investigation of the association between teacher satisfaction and such community characteristics as poverty, remoteness, and social resources. To date, researchers have focused on the relationships between teacher job satisfaction and individual and job characteristics. This research has taken two main approaches: a focus on facet-specific job satisfaction and an emphasis on understanding teachers' overall sense of satisfaction with their job. The first approach has sought to measure the extent to which teachers are satisfied with specific aspects of their job. These include remuneration, physical working conditions, and quality of relationships with supervisors and colleagues, quality of supervision, workload, teachers' social status, opportunities for personal growth and promotion, teachers' skills and professional accomplishments to date, degree of decision-making autonomy, and characteristics of the educational system.



## **Job Satisfaction and Occupational Stress among Permanent and Temporary School Teachers**

In contrast, the second approach has sought to link characteristics of schools and teachers to overall job satisfaction. This approach uses a global measure of teacher satisfaction against which a variety of school and teacher explanatory variables are tested via multivariate analyses. Teacher stress seems to be a universal phenomenon in Western countries, a phenomenon that has been recognized for over more than 25 years and across many (e.g., Borg & Riding, 1991). Teacher stress can be defined as the experience by a teacher of unpleasant negative emotions such as anger, frustration, anxiety, depression and nervousness, resulting from some aspect of their work (Kyriacou 2000). Since the early 1970s, the amount of research on teacher stress has T. Cox, Mackay, S. Cox, Watts, and Brockley (1978) reported that more than 60 per cent of teachers considered working as the main source of stress in their lives. Kyriacou (1980) revealed that teachers, when compared to people in other professions, teachers do experience a higher level of stress than many other professionals.

### ***Aim of the Study***

1. To search the job satisfaction among permanent and temporary school teachers.
2. To examine the occupational stress among permanent and temporary school teachers.
3. To find out the negative correlation found between job satisfaction and occupational stress among school teachers.

### ***Hypotheses***

1. There is no significant difference between among permanent and temporary school teachers dimension on job satisfaction.
2. There is no significant difference between among permanent and temporary school teachers dimension on occupational stress.
3. There is negative correlation between job satisfaction and occupational stress among school teachers.

### ***Sample***

Total 120 school teachers were selected. Among them 60 among permanent school teachers and 60 among temporary school teachers. The age range of school teachers were 20 to 30 years ( $M = 26.45$ ,  $SD = 5.78$ ). Non-probability purposive sampling was used.

### **Tools**

#### **1) Teacher Job Satisfaction Questionnaire (TJSQ): (1996)**

This scale was constructed and standardized by Dr. Pramod Kumar and D. N. Mutha. That test consists of 29 items, each item 'YES' 'NO' type alternatives. Reliability of the test was found by test retest method, and it was found to be .85. Validity Face validity in that questionnaire is very high.

## **2) Occupational Stress Index (OSI):**

This scale was constructed and standardized by Dr. A. K. Srivastava and A. P. Singh. The inventory consists of 46 items, each item is provided with five alternatives 'Strongly Agree', 'more agree', 'agree', 'disagree', and 'disagree', Reliability of the inventory was found by test retest method, and it was found to be .93. The correlation between the scores on the occupational stress inventory and the measure of the job anxiety (Srivastava, 1974) was found to be .59 (N = 400). The employee's scores on occupational stress inventory have been found to be positively correlated with their scores on the measure on mental health, standardized by Dr. O. N. Shrivastava.

### **Variable**

#### **Independent variable**

Type of School Teacher      a) Permanent      b) Temporary

#### **Dependent Variable**

1. Job Satisfaction 2. Occupational Stress

## **STATISTICAL ANALYSIS AND DISCUSSION**

*Table no. 01 Significance difference between permanent and temporary school teachers in term of their job satisfaction and occupational Stress.*

Dimension	Type of School Teachers						t- ratio	df	p
	Permanent (N =60)			Temporary (N = 60)					
	Mean	SD	SE	Mean	SD	SE			
Job Satisfaction	24.59	4.10	0.53	17.55	4.61	0.60	8.84**	118	< .01
Occupational Stress	114.62	5.03	065	141.52	4.28	0.55	31.54**	118	< .01

*0.01= 2.62, 0.05= 1.98*

From the above table mean of job satisfaction score of permanent school teachers mean is 24.59 and temporary school teachers mean is 17.55. The difference between the two mean is highly significant at both level ('t'= 8.84, df =118, P < 0.01) and it is concluded that the permanent school teachers have significantly high job satisfaction than the temporary school teachers. Similar result found that the Kaur Sarbjit and Kumar Dinesh (2008) government college teachers are more satisfaction than the non-government college teachers.

From the above table mean of occupational stress score of permanent school teachers mean is 114.62 and temporary school teachers mean is 141.52. The difference between the two mean is highly significant at both level ('t'= 31.54, df =118, P < 0.01) and it is concluded that the temporary school teachers have significantly high occupational stress than the permanent school teachers. Similar result found that the Kaur Sarbjit and Kumar Dinesh (2008) government college teachers are more occupational stress than the non-government college teachers.

**Table no. 02 'r' showing the significance of relationship between job satisfaction and occupational stress among granted school teachers**

Dimensions	N	r	DF	P
Job Satisfaction	120	- .53	118	.01
Occupational Stress				

The results displayed in table no. 02 clearly indicated the significant relation between job satisfaction and occupational stress. This study also suggests that occupational stress is negatively associated with job satisfaction and occupational stress ( $r = -.31$ ,  $df = 118$ ,  $P < .01$ ). Negative Correlation between job satisfaction and occupational stress.

Nilufar, A., Abdullah, Z., Fie, D.Y.G. & Alam, S.S. (2009) Similar result found that there is significant negative relationship between job stress and job satisfaction. Another study K Chandraiah et al (2003) higher level of job stress and job satisfaction has been found significant relationship between different age groups and also shown that the age was found to be negatively correlated with occupational stress and positively with job satisfaction. One study of general practitioners in England identified four job stressors that were predictive of job dissatisfaction (Cooper, et al., 1989).

In other study, Azman Ismail (2009) demonstrated that level of physiological stress has increased job satisfaction, and level of psychological stress had not decreased job satisfaction. Teacher job satisfaction and stress can have both economic and personal implications as it can lead to stress-related employee absenteeism, burnout and a negative impact on pupil outcomes (Kyriacou, 1987). According to K Chandraiah et al (2003) higher level of job stress and job satisfaction has been found significant relationship between different age groups and also shown that the age was found to be negatively correlated with occupational stress and positively with job satisfaction. One study of general practitioners in England identified four job stressors that were predictive of job dissatisfaction (Cooper, et al., 1989).

## CONCLUSION

1. Permanent school teachers found significantly high job satisfaction than the temporary school teachers.
2. Temporary school teachers found significantly high occupational stress than the temporary school teachers.
3. There is negative correlation found between job satisfaction and occupational stress among school teachers.

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## Perceived Level of Burden of Care and Its Association with Socio-Demographic Profile of Patients with Schizophrenia and Their Caregivers

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### ABSTRACT

**Background:** Schizophrenia is a clinical syndrome of variable, but profoundly disruptive, psychopathology that involves cognition, emotion, perception and behaviour. Caregiver burden refers to negative response that occurs when the caregiver assumes an unpaid and unanticipated responsibility for the person with disabling mental health problems. The burden varies with socio-demographic parameters of patients and caregivers. **Aims & Objectives:** To study socio demographic details of schizophrenia patients and caregivers. To assess perceived level of burden in caregivers and its association with socio demographic profile of patients and caregivers. **Materials & Methods:** Ethics committee approval and informed consent was taken. 100 consecutive patients with their primary caregiver, presenting to psychiatry OPD of general hospital, satisfying inclusion criteria, were included in the study. Socio-demographic details of caregiver were collected using semi-structured proforma. Caregiver's perceived burden was assessed with Burden Assessment Schedule. Data thus obtained, was pooled & analyzed by using SPSS software, descriptive statistics, mean, percentage, Chi-Square test. **Results:** The sample consisted of 52 female & 48 male patients. Prevalence of burden in caregivers was found to be 52%. The perceived burden was found to be high in caregivers of female patients, patients of older age, less educated, single, and unemployed patients. Majority of caregivers were female and of older age. The burden perceived was found to be significantly high in female caregivers, especially mother.

**Keywords:** Schizophrenia, caregiver burden, socio-demographic variables

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## Perceived Level of Burden of Care and Its Association with Socio-Demographic Profile of Patients with Schizophrenia and Their Caregivers

Schizophrenia is a debilitating illness affecting 1% of the world's population. Its treatment is often as varied as its course as well as its symptoms and can pose numerous psychosocial difficulties for patients as well as family members who care for their loved ones. In past 50 years, the deinstitutionalization of psychiatric patients has resulted in transferring the responsibility and day to day care to family members. With the emergence of practice of community psychiatry, families are often integral part of the treatment team.

The role of family has been pivotal in the mental health care programmes in India. In contrast with the emphasis on professionals and institutions in mental health care in the developed countries, the emphasis in India has been on the family as the single most important caregiver of the mentally ill patients.

Evidence suggests that family members experience significant stress in coping with a person with schizophrenia. The caregivers suffer emotional, financial and physical burden while playing the role of carer. Burden of care is influenced by various factors like age, sex, duration of illness, marital status, previous hospitalization, education and family structure, and employment status of the patients and caregivers.

Over the years, the families in India have undergone changes with respect to increasing urbanization, breakdown of the traditional joint families, increasing numbers of nuclear families, increase in the geriatric population, single parent and working parent families. This has led to a decline of resources within the family threatening the support available to patients with chronic mental illness.

Therefore, this study was undertaken to study the perceived level of burden of care and its correlates in caregivers of patients with schizophrenia.

### *Aims & Objectives*

1. To study socio demographic details of schizophrenia patients & caregivers
2. To assess perceived level of burden in caregivers
3. To study association between caregiver burden and socio demographic details of patients and caregivers.

### **MATERIALS**

**Semi structured proforma** specially designed for the study to obtain various socio demographic characteristics like age, sex, education, occupation, marital status, family type and relationship of caregivers with patients etc.

## **Perceived Level of Burden of Care and Its Association with Socio-Demographic Profile of Patients with Schizophrenia and Their Caregivers**

**Modified Kuppuswamy scale (urban) with 2007 modification:** This scale was used to measure the socio economic status of the patient. This scale has been widely used in clinical research and is specially designed for use in urban areas where this study was conducted. This scale assesses the socio-economic status of the patient based on three broad parameters: Education of the head of the household, Occupation of the household and per capita income (in Rs per month). Each parameter is categorized step wise in a descending order and each option is assigned a specific weightage. Five socio-economic classes are defined based on total points as; upper (score- 26-29), upper middle (score- 16-25), lower middle (score- 11-15), upper lower (score- 5-10), lower (score- <5).

**Burden Assessment Schedule (BAS):** It is a structured instrument with 20 items used to assess perceived burden by the caregiver. Each item is rated on a three point Likert scale where 1=not at all; 2=to some extent and 3=very much. The items of the schedule are categorized under five sub domains: Impact on well being, Impact on marital relationships, Appreciation for caring, Impact on relationship with others and Perceived severity of the disease.

### **METHODOLOGY**

Prior to the study, patients and their caregivers were informed of the research objectives and assured of the confidentiality of their responses. Informed consent was taken. Ethics committee approval was obtained. It was a cross sectional study in which, 100 consecutive patients of age 18-60 years, diagnosed as having chronic schizophrenia according to DSM-IV TR attending out-patient set up of Department of Psychiatry in a general teaching hospital and their caregivers were selected using universal sampling method.

The Pollack and Perlick method was used to identify the primary care giver. Socio-demographic details of patients as well as caregiver were collected using semi-structured proforma. Caregiver's perceived burden was assessed using Burden Assessment Schedule. The data was pooled and subjected to statistical analysis using SPSS 17 package; Chi- square test, frequency, mean calculations etc.

### **RESULTS**

As seen in table 1, 45% of the patients belonged to age group of 18-30 yrs & 31-45 yrs with mean age of 34.25 yrs. In the study sample, majority of the patients were unemployed (36%), housewife (32%), belonging to nuclear family (42%), had secondary education (64%), and married (40%).

Among caregivers, majority was in age group 46-60 yrs, was females (59%), and had secondary education (46%). Mothers comprised of 40% of the caregivers while spouses accounted for 33% of them. 73% of the caregivers were married and 41% of them were housewife.



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Perceived burden of care was observed in 48% of the caregivers as seen in chart 1. Among various domains on BAS, 55% of the caregivers perceived burden on factor 1, i.e. impact on well being of BAS and 51.5% of them perceived burden on factor 2, i.e. marital relationship. Only 33% of the caregivers perceived burden on factor 3 which is appreciation for caring. (Table 2)

As observed in table 3, nearly half of the caregivers of patients belonging to age group of 46-60yrs and of female patients, perceived burden. Caregivers of patients with secondary education perceived maximum burden i.e. 59.6% while 19.2% of caregivers caring for patients with higher education perceived burden.

Cumulative percentage of the caregivers who were caring for single patients (unmarried/ separated/ widowed/ divorced) was high i.e. 57.8% and 42.3% of the caregivers who were taking care of married patients perceived burden. Caregivers of unemployed patients perceived maximum burden i.e. 46.2%.

In patients belonging to upper middle and middle socio economic class, caregivers perceived maximum burden i.e. 40.4% and 42.3% respectively. Among patients and caregivers belonging to nuclear families, 48.1% of them perceived burden.

Caregivers in the age group of 31-45 yrs and 46-60 yrs perceived maximum burden i.e. 46.2% each. Female caregivers perceived more burden than male caregivers. As seen in the table 4, this difference was found to be statistically significant. Mother and spouses in their role of caregiving perceived significantly higher burden as compared to other relation as a carer. Caregivers who were secondary educated (42.3%) and housewife (46.2%) perceived the maximum burden. Most of the married caregivers perceived burden.

## **DISCUSSION**

Schizophrenia is a serious, debilitating psychological disorder which not only influences the lives of those affected but also their family. This study is an attempt to understand the caregiver's perception of burden due to patient's illness and its relation with the various socio-demographic parameters.

Majority of the patients belonged to age group of 18-45 yrs with mean age of 34.25 yrs. Almost equal number of male & female patients were assessed in the study. More than half of the patients were secondary educated. Sixty percent of the patients were either unmarried or single. A study done by Shrivastava S et al observed that 71% of the patients were literate and 76% of the patients were married. This is in contrast with findings of this study, where lower rate of marriage may possibly be due to early onset of illness in them.

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Majority of patients were unemployed followed by patients who were housewife. Early onset of illness & ongoing deficits may have resulted in unemployedness in majority of patients. Nearly half of the patients belonged to nuclear family. This shows the changing trends in the modern Indian society where joint family structure is getting dissolved and majority of people stay in either nuclear or extended nuclear family. Similar findings were reported by study done by Chakrabarti S. et al which showed that 53% of the Indian patients belonged to nuclear families.

Amongst caregivers, mean age was 47.23 yrs. About half of the caregivers were from the age group 46-60 yrs. Female caregivers were more than male caregivers. Preponderance of female caregivers in this study is consistent with the tradition of the area. In most of the Asian countries, females and mothers are the traditional caregivers for patients with chronic illnesses.

Majority of the caregivers were married and housewife. These findings are in keeping with a study done by Talwar P et al which showed that in Indian sample, mean age of caregivers was 49 yrs. 62% of the caregivers were females. A study done by Creado et al show those majorities (61%) of the caregivers was females and approximately 50% of the carers were unemployed.

In the studied sample population, 52% of the caregivers perceived burden as assessed on BAS. This is in accordance with a study done by Yusuf and Nuhu who found that 47.3% of the caregivers experienced burden of care giving role. A similar study by Talwar P et al reported that 46% of the caregivers in India perceived low to moderate & 54% perceived high burden on BAS. In a study done by Pereira MG et al it was observed that 76% of the caregivers who were caring for severely mentally ill patients reported burden.

The mean scores of the patients were high on all domains of BAS which measures the negative aspects of caregiving. This clearly shows that family members of schizophrenic patients were significantly distressed. More than half of caregivers reported burden on Factor 1 i.e. impact on well being in terms of feelings of exhaustion, frustration, depression and impact on health in general. This was followed by nearly half of the spouses reporting burden on factor 2 i.e. marital relationship. Only 33% of the caregivers reported burden on Factor 3 i.e. appreciation for caring. This again highlights the characteristics of the Indian caregivers who offer caregiving without expecting appreciation in return.

Table 3 shows association between socio demographic variables of patients and caregivers & burden in caregivers. Maximum burden was perceived by caregiver caring for patients of age group 46-60 yrs. This finding is similar to the study by Gopinath et al which shows that relative's distress increases with an increasing age of the patient. Increasing age may bring along with it other medical problems, decreased work efficiency and increased dependency in patients, increasing burden in the caregivers. However, findings of the present study are in contrast to a

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study done by Dyck DG et al, where the age of the patient was inversely related to the burden in caregivers.

Findings of various studies shows that caregivers of female patients reported significantly higher level of emotional distress than caregivers of male patients supporting findings in the current study. In a male centred society of India, caring for single, unemployed, and mentally ill female patient can be considered a burden. However, these findings are in contrast with a study done by Sibitz et al, which showed that relatives of male patients perceived more burdens.

Caregivers of patients educated up to secondary school perceived more burdens compared to those caring for patients with higher education. This is in accordance with the findings of study done by Dominic U et al who found that caregivers of patients with lower levels of education experienced higher burden than caregivers of patients with higher educational attainment. A higher education guarantees better job opportunities and may convey some socioeconomic advantage, apart from influencing one's health seeking behaviour.

Cumulative percentage of the caregivers who were caring for single patients (unmarried/ separated/ widowed/ divorced) was maximum. In a country like India, where marriage is considered to be the measure of stability, caring for unmarried or single patients can be considered bothersome. A study by Thara and Srinivasan et al has found that married patients showed a remitting or stable course of illness.

Majority of caregivers of unemployed patient perceived burden than those caring for employed patients; thus supporting previous study findings that family members experienced lesser burden when the ill person was employed as shown in a study by Pickett SA et al.

A patient with schizophrenia is often unable to sustain employment due to which family members are often put in an additional financial burden of medical expenses. Caregivers of patients who belonged to nuclear family perceived higher burden than those belonging to joint family. However this association was not statistically significant. Most patients participating in this study were from nuclear families and lack of family and social support can make caregivers perceive more burdens.

Higher burden was perceived by caregivers of middle and older age as compared to caregivers of younger age. One explanation for the relation between middle & late age and high distress is that caregivers, particularly those in midlife, are more likely to have additional major social roles, such as work and other caregiving roles that include raising children and caring for others in family. Also emergence of various medical problems in them adds to the burden perceived.

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However these findings are in contrast to the study done by Sandy M et al which found that younger caregivers perceived maximum burden.

Female caregivers perceived significant burden of their caregiving role. This finding was similar to a study by Sefasi et al which showed that female caregivers perceived more burden than male caregivers. Commonly the female relatives engage in caregiving and have been reported as experiencing most of the associated burden as reported by Pring Le J et al.

One possible explanation could be the genetic makeup of the females making them more vulnerable. Also, the wife caregiver often has to double up as the breadwinner for the family and the dual role can lead to heavier burden. The mother as caregiver is often known to be very involved, remaining by the patient's side all the time and had difficulty detaching herself.

Significantly high burden was perceived by mother as a carer compared to other relations. Historically, parents have shouldered the responsibility for their offspring's illness. The blame of the illness usually comes on parents for their parenting style. The genetic slant to aetiology often hits hard on the parents who saw themselves as the transmitters of the illness.<sup>[24]</sup> As parents, the loss of hope in their schizophrenic child can have greater impact on and a lifelong commitment to the care of the child can result in anxieties and burden. For parents who are older, the concern as to who would care for the patients after their time is often a heavy burden.

High burden of caregiving was perceived by the caregivers with lower education compared to those with higher education. In a research done by Zahid and Ohaeri et al, similar findings were noted. A caregiver with a low level of education would have limited access to mental health facilities because of limited resources, and may be at risk of developing emotional distress because of this additional disadvantage.

High prevalence of burden was felt by the caregivers who were housewife than by the caregivers who were employed. More the caregiver spends time with the patient more is the burden felt by the caregiver.

### **CONCLUSIONS**

Mean age of the patient was 34.25 yrs. Maximum patients belonged to age group of 18-45 years. Almost equal numbers of male & female patients were studied. Majority of the patients were secondary educated, married, unemployed and belonged to nuclear family nuclear family.

Mean age of the caregiver in the sample was 47.23 yrs. Female caregivers predominated over males. Primary caregiver in majority of the patients was mother. More than half of the caregivers had secondary or less education and were married. About half of the caregivers were housewife.

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In present sample population, 52% of the caregivers perceived burden of their caregiving role. Burden was found to be high in caregivers of female patients, patients of older age, single, less educated unemployed, and those belonging to nuclear family. Female caregivers, especially mother perceived significantly high burden.

### Acknowledgments

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**Conflict of Interests:** The author declared no conflict of interests.

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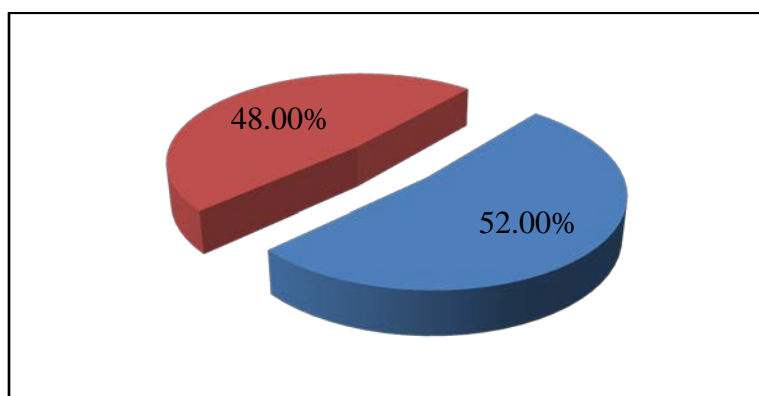
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**Table 1: Socio demographic details of patients & caregivers**

Socio demographic variables		Patients (n= 100)	Caregivers (n=100)
Age	18-30 yrs	45.0%	12.0%
	31-45 yrs	45.0%	37.0%
	46-60 yrs	10.0%	51.0%
Sex	Male	48.0%	41.0%
	Female	52.0%	59.0%
Education	Illiterate	13.0%	21.0%
	Primary	7.0%	24.0%
	Secondary	64.0%	46.0%
	Graduate & PG	16.0%	9.0%
Marital status	Unmarried	40.0%	8.0%
	Married	40.0%	73.0%
	Separated	11.0%	0.0%
	Divorced	5.0%	1.0%
	Widowed	4.0%	18.0%
Occupation	Unemployed	36.0%	6.0%
	Housewife	32.0%	41.0%
	Labourer	11.0%	14.0%
	Service	17.0%	23.0%
	Self employed	4.0%	16.0%
Relationship of caregivers with patients	Spouse	33.0% 40.0% 16.0% 11.0%	
	Mother		
	Father		
	Siblings, children		

**Chart 1: Perceived burden on BAS**



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**Table 2: Perceived burden on various domains of BAS**

Domains of BAS	Mean score	Standard deviation	% of caregivers having burden (n=100)
F1	8.04	2.605	55%
F2	7.97	2.710	51.5%
F3	6.58	2.221	33%
F4	7.20	2.387	43%
F5	7.20	2.420	40%
BAS	31.64	9.975	52%

**Table 3: Association between socio demographic variables of patients & burden in caregivers**

Socio demographic variables		Burden on BAS		'p' value
		Yes: n=52	No: n=48	
Age	18-30 yrs	21 (40.4%)	24 (50.0%)	NS
	31-45 yrs	25 (48.1%)	20 (41.7%)	
	46-60 yrs	6 (11.5%)	4 (8.3%)	
Sex	Male	25 (48.1%)	23 (47.9%)	NS
	Female	27 (51.9%)	25 (52.1%)	
Education	Illiterate	6 (11.5%)	7 (14.6%)	NS
	Primary	5 (9.6%)	2 (4.2%)	
	Secondary	31 (59.6%)	33 (68.8%)	
	Graduate & PG	10 (19.2%)	6 (12.5%)	
Marital status	Unmarried	16 (30.8%)	24 (50.0%)	NS
	Married	22 (42.3%)	18 (37.5%)	
	Separated	8 (15.4%)	3 (6.2%)	
	Divorced	3 (5.8%)	2 (4.2%)	
	Widowed	3 (5.8%)	1 (2.1%)	
Occupation	Unemployed	24 (46.2%)	12 (25.0%)	NS
	Housewife	14 (26.9%)	18 (37.5%)	
	Labourer	6 (11.5%)	5 (10.4%)	
	Service	7 (13.5%)	10 (20.8%)	
	Self employed	1 (1.9%)	3 (6.2%)	
Family type	Joint	8 (15.4%)	14 (29.2%)	NS
	Nuclear	25 (48.1%)	17 (35.4%)	
	Extended nuclear	19 (36.5%)	17 (35.4%)	



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**Table 4: Association between socio demographic variables of caregiver & burden in caregivers**

Socio demographic variables		Burden on BAS		'p' value
		Yes: n=52	No: n=48	
Age	18-30 yrs	4 (7.7%)	8 (16.7%)	NS
	31-45 yrs	24 (46.2%)	13 (27.1%)	
	46-60 yrs	24 (46.2%)	27 (56.2%)	
Sex	Male	15 (28.8%)	26 (54.2%)	0.008**
	Female	37 (71.2%)	22 (45.8%)	
Relationship with patient	Spouse	20 (38.5%)	13 (27.1%)	0.020*
	Mother	25 (48.1%)	15 (31.2%)	
	Father	4 (7.7%)	12 (25.0%)	
	Siblings, children	3 (5.8%)	8 (16.7%)	
Education	Illiterate	13 (25.0%)	8 (16.7%)	NS
	Primary	15 (28.8%)	9 (18.8%)	
	Secondary	22 (42.3%)	24 (50.0%)	
	Graduate	2 (3.8%)	7 (14.6%)	
Occupation	Unemployed	1 (1.9%)	5 (10.4%)	NS
	Housewife	24 (46.2%)	17 (35.4%)	
	Labourer	10 (19.2%)	4 (8.3%)	
	Service	12 (23.1%)	11 (22.9%)	
	Self employed	5 (9.6%)	11 (22.9%)	
Marital status	Unmarried	1 (1.9%)	7 (14.6%)	NS
	Married	37 (71.2%)	36 (75%)	
	Separated	0 (0%)	0 (0%)	
	Divorced	1 (1.9%)	0 (0%)	
	Widowed	13 (25%)	5 (10.4%)	

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## Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training

Tanusree Chakraborty<sup>1\*</sup>, Dishari Gupta<sup>2</sup>, Raiswa Saha<sup>3</sup>

### ABSTRACT

**Purpose-** The present study purports to probe into the nature of psychological predispositions like- leadership, initiative taking, critical thinking, self motivated outlook, risk taking ability and team skills of the aspirants of management programmes who opt for either MBA or PGDM courses and their relation with employability skills. The study attempted to understand the role of psychological predispositions on employability of management students and see whether the training on soft skills received during the management programmes moderates the impact on employability of those students. **Design/methodology/approach** - The study comprises of 330 postgraduate management students from across the four metro cities in India. The data has been collected from the respondents from various management colleges by group administration as well as through Google forms. Overall probabilistic sampling technique was used to collect the samples. Data was collected in three phases. The age group of the participants ranged between 22-27years. **Findings** - Findings suggest that other than leadership ability, all factors- initiative taking, critical thinking, self motivated outlook, risk taking ability and team skills are significant predictors of employability; intensity of soft skills training given by the institute has been found to moderate the relation between psychological predispositions and employability of the students; and among the two categories of educational background covered, management education significantly differentiates the levels of psychological predisposition among management students. **Practical implications** - The practical implication of this paper is that it is highly focusing on the need and indispensability of soft skills training among budding managers who are receiving the technical training in management. The study has clearly demonstrated that intensive soft skills training, in terms of time duration, variety and coverage, moderates the role of psychological predisposition on employability of management students. **Originality/value-**

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## Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training

This original elementary study gives insight into the role of psychological predispositions and importance of soft skills training in employability of management graduates.

**Keywords:** *Psychological predisposition, Managerial Skills, Psychometric Tests, Management Studies Aspirants, Employability, Soft Skills Training*

An MBA is often seen as a way to change career fields, not just positions. An expertise in the business field applies to all industry levels but, specific set of technical knowledge requires one to stick to a specific industry. The critical differentiating factor between an engineer and a MBA is that MBA requires knowhow to deal with people-centric issues, but not technical skills. This requires a different skill set. Management education provides an opportunity to transform career from technical jobs to managerial or into areas of interest such as finance or marketing. And that is probably why there is a high prevalence of management aspirants. Top MBA schools are in the lookout for candidates who are innovative, possess analytical skills, has high leadership qualities has entrepreneurial abilities like creative thinking and risk taking ability and has global awareness.

In the past literature on management studies, a broadly used proverb is “change is only constant”. It is always required for continuous up gradation of knowledge, skills and attitude. This is every much true whether in case of senior executives of the corporate, Faculty Members of the Business Schools or students who are pursuing the Management courses. Previous empirical researches on individual differences in career success represent the main psychological contribution to the study of employability.

Studies have proven to include constructs based on educational and psychological measurements, especially Messick, Samuel (1981) have taken three ontological perspectives on the nature of mediating variables underlying consistencies in test and non test behaviors: The results highlight that all three applied to personality traits, situational forces, and their interactions. This study attempts to include a few psychological pre-dispositional perspectives namely - leadership, initiative taking, critical thinking, creative thinking, self motivated outlook and risk taking ability of the management programme aspirants who opt either for MBA or PGDM courses. The risk taking factor may be of relevance to entrepreneurial orientation and is predicted based on the gender. The female aspirants have reported high emotional quotient on ‘hard work’ and ‘social and trust worthy’ as compared to male takers (Kundu, S.C & Rani, Sunita, 2004). In a similar study conducted among Iran students of under graduation highlights of eight traits that were taken under study. The results postulated especially on the trait – risk taking which is taken for this study indicated of a result on an average grade, whereas open mindedness fell low than other characteristics’ (Salamzadeh.A et al., 2014)

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**Figure 1: The essential components of employability**

**Source: Lorraine Dacre Pool and Peter Sewell**

### ***Need for probing the psychological pre-dispositions***

Psychologists and Non-psychologists alike assume that people have distinct personalities (Mischel, Walter & Shoda, Yuichi, 2008). Most of the findings indicate that there exists few social or any other differences among the personalities. In order to find out the varying range of the differences, it becomes imperative to probe into the psychological pre-dispositions and with specific reference to those management aspirants who are included as subjects of this study. While elaborating on the personality dispositions and processing dynamics, it is evident in the work of Mischel, Walter & Shoda, Yuichi, 2008 that the study has resulted in identifying few broad traits, factors and behavioral dispositions. Hence, in this study the traits that are found to be predominant among the management study takers are attempted to study.

### ***Linking psychometric testing***

Psychometric testing is on the increase (Williams, Nadia 2009), though there has been perils in managing and administering the psychometric tool. The success of psychometric testing, whether used internally or externally, depends more than anything on how it is handled (INSEAD, 2014). Solid fact or psychobabble? Sarah Hancock gets to the bottom of psychometric testing as it showcases psychometric testing can be traced back to the end of the last century it was until the 1930s and 1940s that modern methods were developed. The term covers a variety of tests - straight personality profiles, numerical and verbal reasoning tests, motivation tests and value tests, among others - each designed to reveal a certain area of a candidate's personality, attitude or ability (Hancock, Sarah 1983). Advanced approach in psychometric testing is combining it

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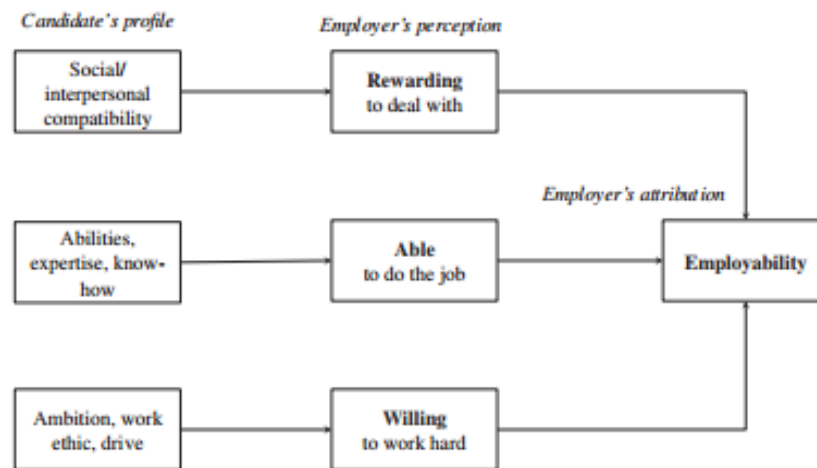
with structural equation modeling (SEM) and meta-analysis. A major advantage of combining psychometric meta-analysis with SEM in theory is that not all relationships specified by a theory need to be included in each primary study (Viswesvaran, Chockalingam and Ones, Deinz.S, 1995).

Psychometric testing among students may be viewed from two perspectives. One is that from the academics side and other is most graduates who are considering a career with a large company or public sector organization must face the prospect of undergoing a psychometric test at some stage in their recruitment (Donkin, Ricahrd 2002). While analyzing, use of the P-scale will require (re-) confirmation of its validity in each new cultural context (Stevlink, S.A, Terwee.C.B, Banstola, N., Van Brakel, W.H 2013). Moreover, psychometric testing can provide a more accurate prediction of a candidate's suitability for a particular role (Anonymous, 2011). From the company perspective, companies who make the investment in psychometric testing for identifying development needs can reap the benefits (Corcoran, Catherine 2005). Though much research has been conducted on psychometric testing the accuracy of psychometric measures becomes the question of the hour. Hence, the most important assessment of a psychometric test is its validity - the proof that it measures what it claims to measure (Fletcher, Cliv, 1997).

### ***Relationship between entrepreneurial and psychological factors***

In reality, entrepreneurs have demonstrated to have the inert psychological factors as the basis for their achievement. In this study, those factors that are included are more relevant to entrepreneurial factors. The article on “Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses” attempts to examine the prevalence of five psychological attributes in a sample of established entrepreneurs. These attributes are mainly need for achievement, locus of control, risk-taking propensity, tolerance of ambiguity, and Type A behavior (Begley, Thomas. M & Boyd., David.P.1987). Other attributes that are of close relevance is need for achievement and risk taking propensity. The other main factor that is of relevance to a great extent is leadership- the ability to inspire and motivate subordinates, especially in the light of the risky character that surrounds early start-up conditions is highlighted as a critical attribute from the founder point of view ( Vecchio.Robert., 2003).

## Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training

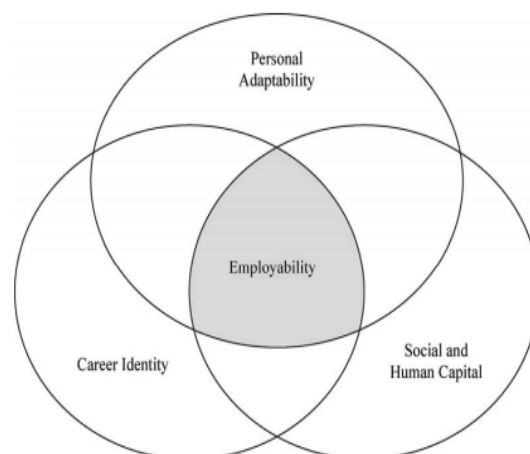


**Figure 2: Determinants of employability**  
 Source: R. Hogan, T. Chamorro-Premuzic and R.B. Kaiser

**Table 1: Generic employability skills**

Generic “core” or basic skills	“Inter-personal” or “relationship” skills	Personal attributes
Literacy	Communication	Capacity to learn
Numeracy	Team working	Willingness to embrace change
Information technology capability	Customer focus	Independent problem solving and reasoning capability
Understanding of systems relationships	Project and personal management	Practicality and a business orientation

Source: The Allen Consulting Group (1999)



**Figure 3: Heuristic model of employability**, Source: M. Fugate et al (2004)

## **Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training**

### ***Soft Skills Training***

Soft skills are the sets of skills that can otherwise be termed as people's skills or personality specific skills. According to Hewitt Sean (2008) soft skills are "non-technical, intangible, personality specific skills", they help to identify an individual's strength as "a leader, listener and negotiator, or also as a conflict mediator". According to researches, employers consider deficiency in soft skills, like communication, teamwork, and customer focus and responsiveness as more important as hard or technical skills (Watkins, 2004). In any management programme, one of the biggest pillars of success is soft skills training. Soft skills training prepares the individual to understand his/her potentials, do a self analysis, work on deficits refines them for the overall development and success of the individual. Whatever professional qualification an individual has today, he has to have a high Soft Skills quotient so that he can succeed in this competitive age.

### ***Employability***

Employability can be defined as a management philosophy, which has been given developed Sumantra Goshal (1997), which refers to the employment and market performance stem from the existing initiative, creativity and competencies of the employees, it would include the ability to procure initial employment; so is the interest in ensuring that the 'key competencies', careers advice and a thorough understanding about the world of work are embedded in the education system. In the present paper employability of management students would be gauged through the recruiters' feedback about them in terms of communication skills, fire in the belly, the cost the company is ready to incur on him/her and the subject (technical) knowledge that the candidate exhibits during placement interview. Employability calls for soft skills and attitudes that help employees to get along smoothly with their colleagues, to make critical decisions, solve problems, develop respect and ultimately become strong assets in the organization.

## **REVIEW OF LITERATURE**

Past research is indicative of using psychological trait as pre-disposition to initiate business as an occupational choice (Sexton.D.L & Upton. N.B, 1990). The following small table shows the necessity of psychological predisposition for acquiring management skills.

Psychometric tests these days are used as one of the major tools in selecting students for management programmes as well as they are effectively being used by organizations in selecting and hiring processes across the globe. The primary predispositions of the management aspirants in terms of the soft skills required for management education can be explicit from the psychometric tests administered prior to admission in the management programmes. Various bodies of researches have come up with the fact that psychometric test results in terms of the behavioural predisposition of an education or job aspirant have yielded positive correlations with the outcomes of performances later in work life.

## **Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training**

Boyatzis (1982) in his study in a consulting firm, compared partners with decidedly high EQ to their partners with average emotional intelligence, it has been found that 41 percent of the high EQ group got their promotions after two years while for those with low EQ, it was ten percent. He also added that partners with high EQ gave nearly double the revenue to the company as compared to low EQ partners (Boyatzis, 1982). The final assertion was that, successful managers exhibited higher levels of competencies, among which emotional intelligence was the most primary one. Exceptional managers were compared with average counterparts and found that 90 percent of the difference between the two groups has been because of difference in Emotional Quotient (Spencer, 1997). In a global study of what companies were expecting in their new incumbents it has been found that 67 percent of the preferred characteristics were Emotional Quotient (Jacobs & Chen, 1998).

Carland et al (1995) in their study examined the risk taking tendency among of 114 entrepreneurs, 347 small business owners, and 387 managers using the Risk Scale of the Jackson Personality Inventory. Entrepreneurs demonstrated a significantly higher risk taking tendency than did small business owners or managers with not a significant difference. The researchers suggested that entrepreneurs displayed a greater predisposition for risk taking than either small business owners or managers. According to Owen and Taljaard (1996), psychometric tests can contribute to the efficiency of selection and placement in industry, if used carefully and responsibly.

Powell and Ansic (1997) investigated if there are gender differences in risk taking tendency was a general attribute of an individual or happening because of the situation he is in. In the first half of the experiment participants were told to make 12 completely disconnected insurance choices. From amongst student's population, 62 male and 64 female were employed as sample. Results suggested that male and female participants did not differ significantly in the risk taking ability i.e. decision choices here. In another part of the study it has been found that females have lower risk taking susceptibility as compared to their male counterparts.

In their researches, Jones et al. (1997) and Rosenthal et al. (1997), showed that managers pursued policies desired to increase employee commitment flexibility and of course motivation. He asserted that, in hotel chain management; elevated quality of service, genuine and more passionate social interactions between employees and visitors were the explanation in gaining competitive advantage (Jones et al. 1997).

Psychometric tests are the most commonly employed as aids in occupational decisions, including the selection and classification of human resources. From the assembly line operator or bank clerk, to top management, there is hardly any type of job for which some kind of psychometric test has not proved helpful in matters of hiring, job assignment, transfer, promotion, or



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termination (Anastasi & Urbina, 1997). Thus researchers claim that results of psychometric tests are quite reliable in occupational decisions.

Turner (2001), in his study found that the skill set necessary for Information Science professionals to execute their tasks successfully and competently, thrust should be given to a couple of soft skills, among which attitude is very important factor, and those soft skills which have been influenced by life and experiences gained by the person at work. Ilana Lavy and Aharon Yadin (2013), in their study “Soft Skills – An Important Key for Employability in the "Shift to a Service Driven Economy" Era” map the soft skill requirements for IT graduates. The study found that human interaction skills were high on the demand list (41.2% of the soft skills ads), common (or general skills) were in second place (22.8% of the ads), task interaction took third position (20.2% of the ads) and organization skills were the least requested (15.8%). Schulz (2008) from his research says that, soft-skill training is still predominantly not so much emphasized in science and engineering courses, and that led to poor growth of the professionals in these fields (William 2011).

Thompson et al. (2001) asserts that social skills are central in interactive service work. Front-line staff would transmit valuable styles of interacting in their individual life into communication with customers and result in better performances. This approach can be interpreted as widening the latent capacities for employees to utilize their social skills. Prasad Kaipa et al. (2002) researched on the role of soft skills development in the entrepreneurial success. Their constructs for success in business were negotiation, leadership; conflict resolution, decision-making, communication, creativity and presentation skills, and they found that those soft skills are indispensable for entrepreneurial accomplishment and making the most of talents in any venture. The summary of findings is that is soft skills are often ignored due to which entrepreneurial success might be questioned; without soft skills companies cannot prosper.

In his book, Bailey (2002) suggests using Kouzes and Posner’s (1987) leadership practices and gives simple explanations of these practices. For example, “challenging” could be to ask questions, rethink ideas, find alternatives, and improve. “Inspiring” could be to describe a picture of the company in a few years and the motivation for employees. “Enabling” involves fostering collaboration, communication, and giving employees motivation. “Modeling” includes setting an example and being financially responsible. “Encouraging” embodies motivation from immediate feedback, listening, showing respect, and appreciation for employees (Bailey, 2002). Bickelhaupt (2003) explains that leadership is a hot topic today and since communication and integrity are the keys to success.

Subhash C. Kundu and Sunita Rani (2010) in their article termed “Female aspirant human resources’ entrepreneurial orientation: A study in Indian context” found the highest score of the

## **Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training**

female respondents in achievement motivation as compared to other three personality descriptors and lowest but positive score on the self-esteem dimension. Among attitude components, cognition had emerged as highest. MBA pass outs showed comparatively less entrepreneurial orientation than other categories of female aspirants. Results indicated that lower age, lower educational qualifications and high socioeconomic status were supporters of entrepreneurship.

The conceptualization of entrepreneurial orientation consists of three dimensions: proactiveness, risk taking, and innovativeness. A literature review verified that the above mentioned three dimensions are used quite commonly in entrepreneurial research (Covin et al.,1989,1991; Knight, 1997; Morris et al.,1987; Miller,1983; Zahra & Covin, 1995; Zahra, 1993). Innovation implies the seeking of creative solutions to problems and needs. These solutions appear in the guise of new processes and technologies besides taking the form of new products and services (Vesper, 1980). According to many risk taking implies willingness to commit huge resources to opportunities which involve probability of high failure (Stewart,2001; Gasse,1982), Proactiveness is the tendency to anticipate and prepare to meet the future needs and opportunities of the market (Schwartz, Teach, and Birch, 2005; Kouriloff ,2000; Lumpkin and Dess, 1996) and has advantage to become a trailblazer and also always struggle to have an upper hand over their competitors (Kerin, 1992).

Finally employability of management aspirants studying management courses is a big question in today's employment market. A few literatures in the following table would signify the importance of this matter.

**Table 2: Summary Table for Highlights from Literature Review**

<b>Researchers/ Paper Type</b>	<b>Findings</b>
Robert Hogan, Tomas Chamorro- Premuzic, Robert B. Kaiser, 2013/ Empirical	IQ and personality predict educational performance. Personality traits predict all of the work-related outcomes Research should be focused on HR's need for recruitment, selection, training, outplacement, management practices, and the entire employee life cycle.
Donald L. Sexton, 1990/ Experimental	Psychological propensities of female and male entrepreneurs are more similar than they are different, but are not a basis for sexual stereotyping.
Talibova Shelale Rasim, 2008/ Analytical	Human resources and psychology together is the prime factor delineating HRM theory and practice from its more traditional personnel management origins. Psychometric tests, Simulation, assessment tests and even handwriting analysis were found important.
Steve McKenna, 2004/ Conceptual	The education of business students and managers, on courses at university and in-company, dealing with managerial skills are deficient because "skills" cannot be abstracted from either the person or the context.

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Sweta Jha, Manoj Kumar, 2011/ Analytical	Need for Indian B-Schools to amend relevant critical issues and revitalize management education
Natarajan. S, Bijoy Kumar Kandel, 2014/ Experimental	Highly important skill is communication followed by Leadership skills, Decision making skills, Team building skills, Ability to analyze qualitatively, Problem solving skills and Ability to analyze quantitatively. Computing skill is required to a lesser extent; interpersonal skills lacking among job aspirants
Sujoy Kumar Dhar, 2012/ Literature Review Paper	Institutions should focus on corporate visits and rural visits, offering V-Sat based program, soft skill and personality development courses, tie-up with foreign campuses are some of the things
Daggubati Vasant Chowdhury, Mahesh Ponnuru, 2015/ Survey based report	67% of human resources managers said they would hire an applicant with strong soft skills whose technical abilities were lacking. 92% felt that technical skills are easy to acquire rather than soft skills. Communication helps to reduce conflicts in the organization.

After studying the extant literature and building the theoretical understanding, the present study has undertaken a few variables that together compose a psychological predisposition of a management aspirant. They are-

- 1. Risk Taking Behavior:** refers to the tendency to engage in activities that have the potential to be harmful or dangerous. On one hand, such behavior puts those who engage in it in risks; on the other hand, it gives managers the chance to experience an outcome they perceive as positive.
- 2. Critical Thinking:** Critical thinking is that mode of thinking — about any subject, content, or problem — in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. For managers, it entails effective communication and problem-solving abilities.
- 3. Team Skills-**Teamwork is usually referred to the willingness of a group of people to work in a togetherness situation to achieve a common aim. Those who are strong in teamwork are assumed to possess high team skills
- 4. Self Motivated Outlook-** Self motivated outlook can be defined as a characteristic by virtue of which individuals feel motivated to do or achieve something because of one's own enthusiasm or curiosity, without needing pressure from external sources.
- 5. Initiative Taking Behavior:** Researchers Michael Frese and Doris Fay define initiative as "work behavior characterized by its self-starting nature, its proactive approach, and by being persistent in overcoming difficulties that arise in pursuit of a goal." Initiative has become increasingly important in today's workplace. Organizations want employees who can think on their feet and take action without waiting for someone to tell them what to do.
- 6. Leadership Skills:** Leadership skills are an essential component in positioning executives to make thoughtful decisions about their organization's mission and goals, and properly

## Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training

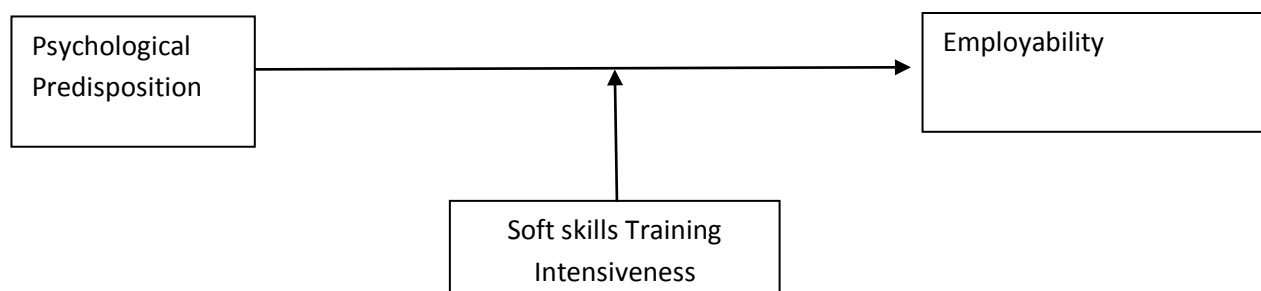
allocate resources to achieve those directives. Valuable leadership skills include the ability to delegate, inspire and communicate effectively.

### CONCEPTUAL FRAMEWORK AND HYPOTHESIS

The present study conceptualizes that psychological predispositions of the management programme aspirants have an impact on their employability when they are finally placed in jobs after the completion of the management programmes. Whatever background of education they come from, technical or non technical education has no impact on their composite psychological predisposition; however if they have undertaken some management programme, prior to joining masters in management programme they are expected to differ in terms of their composite psychological predisposition. Taking into consideration the six sub factors of psychological predisposition which are deemed to extremely important in literature of managerial success, the factors of leadership ability, risk taking behavior, self motivated outlook, team skills initiative taking behavior and critical thinking are conceptualized to have positive relation with employability.

#### *Construction of Hypotheses*

1. There is no significant impact of education (technical/non technical) on composite psychological predisposition of management program aspirants.
2. There is no significant impact of background (management/non-management) on composite psychological predisposition of management aspirants.
3. There is a positive relation between Leadership Ability and Employability Skills.
4. There is a positive relation between Risk Taking Behavior and Employability Skills.
5. There is a positive relation between Self Motivated Outlook and Employability Skills.
6. There is a positive relation between Team Skills and Employability Skills
7. There is a positive relation between Initiative Taking Behavior and Employability Skills
8. There is a positive relation between critical thinking and Employability Skills.



**Figure 4: Conceptual Framework**

**Source: Authors compilation**

## METHODOLOGY

### *Participants and Procedure*

A cross-sectional survey design was administered and survey was collected through online Google forms and also individual administration over 15 management institutes. A total of 750 impressions were circulated through online and we received a filled-in response from 330 management students across the country. We used overall probabilistic sampling technique to collect the samples. Data was collected in three phases, one in the first semester when they just entered the course, second phase after they completed their training, and third set was collected after their placements, on the basis of the recruiters' feedback collected by the placement officer; both students and placement officers (in charge of training and placement records) were engaged in data collection. The age group of the participants ranged between 22-27 years.

### *Measures*

The instruments used for the study are the following:

- 1. Psychological Predisposition-** Psychological Predisposition was measured by a 60 item scale developed specially for this purpose. The scale consisted of 60 items of Likert type, responses in the form of Strongly Disagree to Strongly Agree. It consisted of 10 items in each factor, namely, Leadership Ability (10 items), Critical Thinking (10 items), Self Motivated Outlook (10 items), Team Skills (10 items), Initiative Taking (10 items) and Risk Taking (10 items). When the instrument was developed, it was tested among 50 students of MBA Programme from business management colleges, as pilot study. According to their suggestions, few items were revised to improve the clarity and understandability. The Cronbach alpha for the scale was found to be 0.76.
- 2. Soft Skills Training Intensiveness-** For measuring Soft Skills Training Intensiveness, three factors were chosen- Training Time in Hours (3 items), Coverage of Training Content (3 items), and Variety of Training Provided (3 items). The Cronbach alpha for the scale was found to be 0.75.
- 3. Employability-** For measuring employability a 12 item Likert type scale was developed where recruiters for final placements were required to fill the data after the selection process. The factors covered were Communication Skills (3 Items), Subject Knowledge (3 Items), CTC Offered (3 Items), Fire in the Belly (3 items). The Cronbach alpha for the scale was found to be 0.77.

*Table 3: Summary of factors, number of items and reliability (N= 350).*

Constructs	Factors	Abbreviations	No. of Items	Cronbach alpha ( $\alpha$ )
	Leadership Ability	LA	10	0.75
	Critical Thinking	CT	10	0.89
	Self Motivated Outlook	SMO	10	0.69
	Team Skills	TS	10	0.84

## Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training

Constructs	Factors	Abbreviations	No. of Items	Cronbach alpha ( $\alpha$ )
Psychological Predisposition	Initiative Taking	IT	10	0.65
	Risk Taking	RT	10	0.78
Soft skills Training Intensiveness	Time in hours	TH	3	0.74
	Coverage	C	3	0.76
	Variety	V	3	0.75
Employability	Communication	COM	3	0.74
	Subject Knowledge	SK	3	0.72
	CTC offered	CTC	3	0.86
	Fire in the belly	FIB	3	0.79

*Source: Authors Compilation*

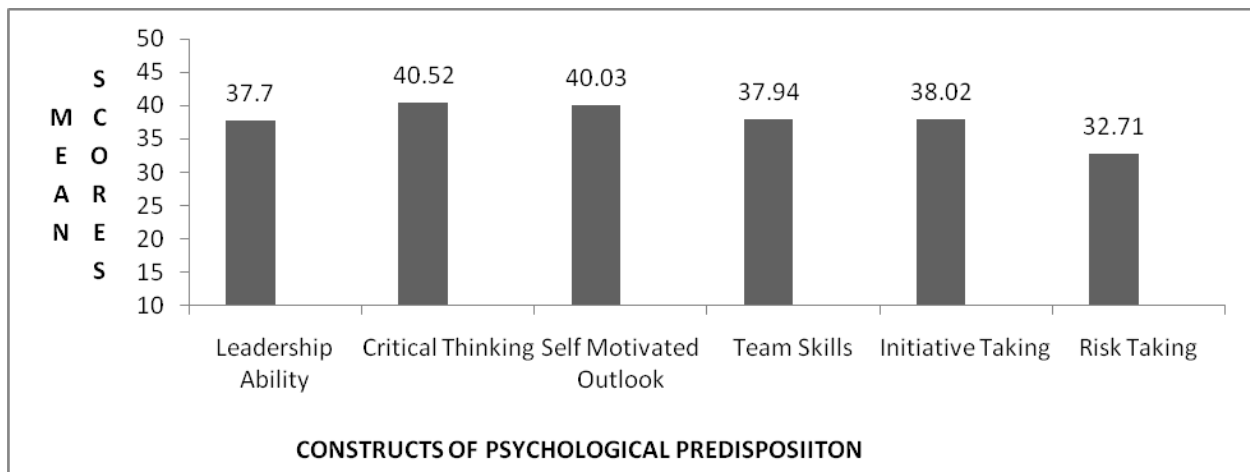
### DATA ANALYSIS AND FINDINGS

The data collected for the purpose of the study were scrutinized and finally employed for analysis. Finally 330 responses were utilized for the purpose of the study.

**Table 4: Descriptive Statistics for Variables under study**

S. No.	Factors	N	Mean	SD
1.	Leadership Ability	330	37.70	4.57
3.	Self Motivated Outlook	330	40.03	5.61
4.	Team Skills	330	37.94	5.33
5.	Initiative Taking	330	38.02	6.33
6.	Risk Taking	330	32.71	8.67

From the above table, it is evident that critical thinking has the highest mean followed by self motivated outlook, initiative taking behavior, thinking style, leadership abilities and finally risk taking behavior. The distribution is depicted in the following diagram.



**Figure 5: Graphical Representation of the Levels of Six Categories of Psychological Predispositions**

*Source: Authors Compilation*

## Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training

Regarding hypothesis 1 since the result of the Levene's test of equality of error variance does not indicate homogeneity of variance for background on psychological predisposition [16.042 (0.000)], Brown-Forsyth test was conducted instead of one way ANOVA to test the hypothesis. The Brown-Forsyth value [.748 (.388)] shows background whether technical or non technical does not have any impact on composite psychological predisposition of management aspirants. Thus H1 is supported.

Regarding hypothesis 2 since the result of the Levene's test of equality of error variance does not indicate homogeneity of variance for education on psychological predisposition [7.336 (0.007)], Brown-Forsyth test was conducted instead of one way ANOVA to test the hypothesis. The Brown-Forsyth value [128.826 (.000)] shows education whether management or non management does have impact on composite psychological predisposition of management aspirants. *Thus null hypothesis is rejected and alternative hypothesis is accepted.*

**Table 5: Hierarchical structural equation estimates**

Predictors of Employability	Model 1	Model 2	Model 3
Leadership Ability	0.051 <sup>ns</sup>		
Critical Thinking	0.723***		
Self Motivated Outlook	0.074**		
Team Skills	0.830***		
Initiative Taking	0.075***		
Risk Taking	0.072**		
R <sup>2</sup>	0.61		
Psychological Predisposition		0.82***	
Time in hours X Psychological Predisposition			0.074***
Coverage X Psychological Predisposition			-0.006 <sup>ns</sup>
Variety X Psychological Predisposition			0.053***
R <sup>2</sup>			0.286
$\Delta R^2$			0.281
<i>Model 1 fit: cmin/df = 4.435 (met the condition); CFI = 906 (Good fit), RMSEA = 0.069 (Good fit)</i>			
<i>Model 2 fit: cmin/df = 4.435 (met the condition); CFI = 906 (Good fit), RMSEA = 0.069 (Good fit)</i>			
<i>Note:</i> *** denotes significance at 0.001 level ** denotes significance at 0.01 level <sup>ns</sup> denotes estimates not significant at 0.05 level			

Source: Authors Compilation

For the purpose of the present study, hierarchical linear regression analysis were run following the recommendation of Aiken and West; for this purpose the obtained data were mean centered and was done by creating new centered independent and moderator variables after deducting the mean values of respective independent and moderator variable term. The results obtained, tell us that the  $\beta$  value for Psychological Predisposition has been found to be 0.82\*\*\* ( $p < 0.001$ ), as individual predictors,  $\beta$  for Leadership Ability 0.051<sup>ns</sup> and has not been found to be significantly

## Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training

impacting employability; for others factors it has been found that all the sub categories of psychological predisposition have been found to be significantly contributing to employability. (Table 5). While looking into the interaction between psychological impact and intensiveness of training offered to the students, it has been found that time in hours and variety of training provided do have significant impact on employability.

**Table 6: Hypotheses and Model Validation**

Hypotheses	Definition	p/β values	Significance	Results
H1	There is no significant impact of education (technical/non technical) on composite psychological predisposition of management program aspirants.	0.748**	P< .001	Supported
H2	There is a impact of background (management/non-management) on composite psychological predisposition of management aspirants.	128.82**	P< .001	Supported
H3	There is a positive relation between Leadership Ability and Employability Skills.	0.051 <sup>ns</sup>	<i>not significant at 0.05 level</i>	Not Supported
H4	There is a positive relation between Risk Taking Behavior and Employability Skills.	0.072**	< 0.01	Supported
H5	There is a positive relation between Self Motivated Outlook and Employability Skills.	0.074**	< 0.01	Supported
H6	There is a positive relation between Team Skills and Employability Skills	0.830***	<0.001	Supported
H7	There is a positive relation between Initiative Taking Behavior and Employability Skills	0.075***	<0.001	Supported
H8	There is a positive relation between Critical Thinking and Employability Skills	-0.007 <sup>ns</sup>	<i>not significant at 0.05 level</i>	Not Supported

## DISCUSSION

Initiative taking skills is one of the important life-skill for success of many multinational companies. They look out for job aspirants having employability skills and soft-skills such as initiative taking skills and risk taking behavior to add value to the organization. We often come across the employees having negative attitude of saying "it is not my job ". Initiative taking by the employees and having a self motivated outlook with certain leadership abilities help business organizations in improving productivity, increase profits, increase business development, and new product development, problem solving and most importantly cost reduction.



## **Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training**

The present survey clearly indicates that education whether technical or non technical leaves no marked impact on psychological predisposition of management aspirants i.e. the perception level regarding psychological predisposition remains uniformly negligible for both the categories. But those who have had exposure to Management related subjects show different response to psychological predisposition compared to those students who come from streams having no or little exposure to management related subjects. Since most of the students opting for management studies are driven by a motivation of getting a good job and are presumably ignorant of different aspects of the new terrain, they show a naivety towards psychological predisposition. However the sections already exposed to part of the study content display some kind of instinct towards psychological predisposition. The general courses and the technical courses that different universities offer do not incorporate soft skill development and other alive training for the potential management aspirants. This lack has to be compensated by incorporating soft skill development in the management syllabi. This way their deficiencies in psychological predisposition may be compensated.

Our study also suggests that regarding response to psychological predisposition, there is no recognizable difference between male and female students. This may be because both male and female management aspirants enroll themselves for MBA for lucrative job prospects. Nurturing one's psychological predisposition to be a future manager does not occur to them. Training on these areas might develop them to be emotionally and psychologically better prepared managers.

Research suggests proactive people or people who take initiative actively seek information and opportunities for improving things; they don't just passively wait for information and opportunities to come by their way. Frese et al. (1997) described the concept of personal initiative as "involving an active and self-starting approach to work". Bateman and Crant (1993) argued that proactive individuals actively create environmental change, while less proactive people try to take a more reactive approach toward their jobs. Research has established relationships between proactive personality and individual job performance (Crant, 1995), career outcomes (Seibert, Crant, & Kraimer, 1999), leadership (Bateman & Crant, 1993; Crant & Bateman, 2000), organizational innovation (Parker, 1998), team performance (Kirkman & Rosen, 1999), and entrepreneurship (Becherer & Maurer, 1999; Crant, 1996). A study of MBA students found a positive relationship between a student's Proactive Personality Scale Score and being nominated by peers as a transformational leader (Bateman & Crant, 1993). So these studies conform to the fact that initiative taking behavior, leadership abilities, innovation and outlook all these factors do make up a successful entrepreneur. Even a manager working in higher capacity needs these dispositions to be a dynamic resource for the company. Soft skill training would probably boost up these covert psychological predispositions in students. The result is evident from the data where students coming from non technical background but has studied

## **Role of Psychological Predisposition on Employability of Management Students: Moderation Analysis through Soft Skills Training**

management in undergraduate level varied significantly than students not from management background in undergraduate level in terms of psychological predisposition.

Crant (1996) also presented data from undergraduate and MBA students demonstrating a positive correlation between proactive personality and intentions to own one's own business ( $r = .48$ ). Proactivity in the data explained an additional 17% of the variance in entrepreneurial intentions after controlling gender, education, and whether the students had a parent who was an entrepreneur. A study on 215 presidents of small scale companies explained the relationship between proactive personality and entrepreneurial behaviors (Becherer & Maurer, 1999). Analysis of variance on the data showed that proactivity was related to initiating a business rather than buying or inheriting a business, and especially with the number of businesses started. Becherer and Maurer concluded that proactive presidents use their firms to actively shape the environment, and they aggressively grow their companies as a part of business strategy. All these research suggests a probe into the psychological predisposition of potential entrepreneurs or managers to prepare them for a better future.

The present study also suggests that regarding response to psychological predisposition, there is no recognizable difference between male and female students. That the male and female students respond almost in an identical way to psychological predisposition may be attributed to the fact that the choice of a career by a management aspirant is not affected by gender lines. Women's position in relation to the market has shifted dramatically during the twentieth century with a workforce participation rate for females at the national level at 25.51% compared with 53.26% for males. A total of 20.5% women were employed in the organized sector in 2011 with 18.1% working in the public sector and 24.3% in the private. Also alarming is the share of women swarojgaris in the total swarojgaris assisted under the Swarnjayanti Gram Swarojgar Yojna (2012-13) which is 81.4%. Such economic demands are mediated by the complexity of family-work balance. IndiaStat: Statewise Enrolment at various levels of Higher Education in India-Part 1 (2012-13) indicates 45.9% of all enrolled undergraduate students in India are women, 40.5% of all enrolled Ph.D students are also women. Nurturing one's psychological predisposition to be a future manager does not occur to most of the students. Role of soft skills training has been established to be a crucial factor in terms of employability. So management institutes should take due care in this regard. Training on these areas might develop them to be emotionally and psychologically better prepared managers. In sum, soft skills training is actually about enabling and empowering. With added emphasis on soft skills training, and already identifying the psychological predispositions among the budding managers, it would be a very successful metamorphosis of management students to future managers whom the industry is looking forward to embrace with positive expectation.

## **CONCLUSION**

Management courses develop skillful workforce which constitute leaders of future as well as competitive managers. It is imperative to Indian B-Schools to make management education context specific. Professional Education now needs to move beyond conventions in order to catch up with a rapidly changing context. Given the developments in today's business environment, preparing students for their future will require significant change in the curriculum and pedagogy. A longitudinal study to track changes in the student's perception of psychological predispositions taken over a period of time can provide more insights into the research.

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## Values and Sex Behavior Attitude among Engineering College Students in Relation to Socio-economic Status

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### ABSTRACT

In this era, the value and sex behaviour attitude of the Youth plays important role for the healthy society. The present study is conducted to investigate the values and sex behaviour attitude among engineering college students of Jalgaon city. Kamal Dvivedi and Shagufta Hafeez (1995) Values Scale and Dr Yashvir Singh (2004) Sex Behavior Attitude Inventory is used for the for the sample of 40 students of age group 18-22 years from engineering college of Jalgaon City.

**Keywords:** *Values, Sex Behavior Attitude, Socioeconomic Status and engineering College Students*

In this era, the value and sex behavior attitude of the Youth plays important role for the healthy society. Human values depend on family culture and environment. Values play important role in developing attitudes of various approaches. Values are learned, developed and are instrumental for the change in one's life. Individuals acquire experiences. They grow, learn and internalize values as a result of their experiences and experiments in life, through socio-cultural interactions and interpretations. Thus, values are constantly related to the experiences that shape them and test them. They are not, for any one person, so much rigid. As a result of a sufficient amount of influence, certain patterns of evaluating and behaving tend to develop. Certain things are treated as right, desirable or worthy. These tend to become our values.

The sexuality is a basic human experience. Apart from its anatomical, physiological, biochemical and psychological components; it has a personal component which gives it a private meaning and thus, it has been a topic not discussed openly. Sexual attitude refers to how people accept sexual activity for themselves or others. Sexual attitude have been identified as a central concept in the studies of sexuality because it affects many other aspects of sexuality including sexual behavior, sexual fantasies and responses to sexual cues in the environment. The sexual attitudes have

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changed in the last century. Previously sex was mainly for reproductive purposes and emphasis on pleasure was not as important. Sexual attitudes have become more permissive over the recent decades. Many youngsters are engaging in premarital sexual practices with the changing times. Now-a-days, the news-media reports violent sexual assaults everyday and many go unreported. Rapes and murders do not surprise us anymore. It is important to investigate the psychological and social reasons behind impulsive, aggressive sexual behaviors. Both educated and uneducated people hold similar views of sexual behaviors. It is misunderstood by both the classes. Their minds occupied with prejudices. Human values have becoming disintegrated. In such a situation it becomes necessary to study the problem systematically and scientifically.

### ***Significance of the Problem***

Though students know what patriotism is, it should be studied whether it is inculcated among them or not. Many of them are away from the feeling of sacrifice, devotion and pride for the nations. The present world is very competitive and every moment we are facing some opportunities and threats in our lives. The world is coming closer by technology and various opportunities are available now. Some of the students are aware of it and therefore they know the real value of time. They know time is worth and once it is spent; we cannot get it back. Therefore they are having good approach for the honesty, punctuality. As there are many religions, castes and communities in India; college students are aware of it. They know about our traditions culture and history of freedom. They have understanding about having respect of other religions .in short values gave the shape of the personality of an individual. The term value in the present study means a pattern of generalized attitudes with real independent existence indicating the desirability of behavior in terms of social and psychological needs.

### ***Basic Concept in the Present Study***

**Value:** Value is systematically loaded word: The term value has different connotations; depending on the context in which is used. Value means principles, ideals, standards, morals, ethics and worth. "a norm or standard of desirability within a culture and interiorized within the individual through interaction with his environment."

**Sex Behavior attitude:** These are a person's beliefs about sexuality shown by a person's behavior and are based on views.

**Engineering Students:** Students studying in under graduate level in engineering colleges of Jalgaon city in the year 2015-16.

**Socioeconomic Status:** - Socioeconomic status is commonly conceptualized as the social standing or class of an individual or group. It is often measured as a combination of education, income and occupation.

## **REVIEW OF LITERATURE**

**Rastogi (1974)** undertook a comparative study to find out the value system of students belonging to different professional courses i.e. Engineering, Medicines, Pharmacy and Draftsmanship. The investigator found that all the four groups were high in science values and low in aesthetic values.

**Agrawal (1959)** designed a study to explore the value systems and dimensions of students in U.P. The data was collected from the students of six faculties, namely arts, science, law, commerce, engineering and medicine of Lucknow and Roorkee Universities. The major findings are following:

1. The commonly liked ways of life are those having emphasis on self restraint, moderation and integration of action, enjoyment and contemplation.
2. The conceived values of an individual largely taken into account the cultural pattern of the requirements of the social system.
3. In religious values and temporal change, much emphasis is placed on human effort, and fate is also favored suggesting the dependence and adherence to his culture.
4. In value preference, the value items preferred were qualities of friendship, worthy aim and aspiration.
5. In case of social values, subjection to parental authority is not very rigid and students have a congenial outlook towards the outer world.

**Nisar (2000)** conducted a comparative study of value profile among engineers, doctors, and teachers. The sample consisted of 210 professionals from certain departments of A.M.U. Aligarh. It has been observed that teachers and doctors are more inclined towards social, knowledge, aesthetic and family prestige values in comparison to engineers. Engineers are inclined towards economic and democratic values. Teachers are more inclined towards religious values than doctors and engineers. Doctors are more concerned with health value than the engineers and teachers.

**Erin Cross & Rustain Morga ( 2003-4)** The sexual attitudes and behaviors of college students have changed throughout the recent history, as has sex education. What has been created is a generation of college students who are more knowledgeable about sexual positions and protection than previous generations of students. This has resulted in a generation who engages in sexual experimentation earlier than ever before, dangerously mixes alcohol and sex, and can access sex or sex information 24 hours a day with just the click of a mouse. Consequently, sex educators are forced to find new ways to reach this population of students. Inundating students with information during their required classes, utilizing multimedia approaches, and increasing cultural competency among health educators are all innovative ways that educators are successfully bringing sex education to the college campus. However, the dangerous sexual

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behaviors that college students engage in are not likely to go away over night; educators must continue to be diligent adults. and creative in their efforts to educate young.

**Busisiwe Kopele and Almon Shumba (2011)** The study was conducted at the Alice Campus of the University of Fort Hare using a target population of 362 second year Psychology students. In this study, a purposive sample of 30 students (10 male, 20 female; aged 17 – 30 years) was selected from the population. However, 3 (10 percent) participants decided to pull out of the study at the last minute. As such, the research report was based on a total of 27 participants. The final sample comprised of 9 (33.3 percent) male and 18 (66.7 percent) female participants. The findings of this study are an eye-opener on the sexual behaviors and attitudes of students towards safe sex in universities. The findings have revealed that most students engage in unprotected sex and that some students fear taking an HIV test. Since young people are the future leaders, there is need to educate them about the consequences of unprotected sex. Our communities need to stand together and educate the young people about the dangers of having multiple partners and unprotected sex.

### ***Aim of the Study***

Study of the Values and Sex Behavior Attitude among Engineering College Students, in Relation to Socioeconomic Status.

### ***Objectives of the study***

1. To study the difference between Aesthetic, economic, moral, political, religious, social and theoretical values of Male and Female students.
2. To study the difference between aesthetic, economic, moral, political, religious, social and theoretical values of high and low socioeconomic status among engineering college students.
3. To study the permissiveness and restrictiveness of sex behavior attitude of male and female students.
4. To study the permissiveness and restrictiveness of sex behavior attitude of engineering college students having high and low socioeconomic status.

### ***Hypotheses of Research***

1. There is no significant difference between aesthetic, economic, moral, political, religious, social and theoretical values of male and female students.
2. There is no significant difference between different aspects of Values of engineering college students having high and low socioeconomic status.
3. There is no significant difference in permissiveness and restrictiveness of sex behavior attitude between male and female Engineering college students.
4. There is no significant difference in permissiveness and restrictiveness of sex behavior attitude between engineering college students having high and low socioeconomic status.

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### Variables

#### 1. Independent Variables

- A- Science College Students.
- B- Gender: Male and Female.
- C- Socioeconomic Status High and Low.

#### 2. Dependent Variables

- A) Scores on Values Scale
- B) Scores on Sex Behavior attitude Inventory.

## METHODOLOGY

### Sample

Simple random sampling method is used. The sample of 40 students studying in Engineering College in Jalgaon City is taken.

### Experimental Design

In the present research, 2x2 factorial design is used.

	Faculty		
	Engineering College		
Gender	High SES	Low SES	Total
Boys	10	10	20
Girls	10	10	20
Total	20	20	40

### Tools of the Study

**Values Scale (1995):** This test constructed by Kamal Dvivedi and Shagufta Hafeez. In this test consists of 30 items. This test has split half reliability of .87 and validity is .55 which is age group wise Validity is .45.

**Sex Behavior Attitude Inventory (2004):** This test constructed by Yashvir Singh in this test consists of 40 items in two dimensions is permissiveness and restrictiveness. This test has split half reliability which is .57 Validity is .35.

## RESULT AND DISCUSSION

*In this part investigator has explained the result related to statistical analysis and hypothesis*

### Hypothesis no -1

There is no significant mean difference among aesthetic, economic, moral, political, religious, social and theoretical values of boys and girls in engineering college students.

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**Table No.1**

Group Statistics						
Values	Gender	N	Mean	Std. Deviation	t	Sing
Aesthetic	Male	20	71.64	9.98	.273	N.S
	Female	20	72.37	6.34		
Economic	Male	20	66.35	12.26	1.19	N.S
	Female	20	70.30	8.27		
Moral	Male	20	44.33	8.84	.904	N.S
	Female	20	41.89	8.23		
Political	Male	20	55.70	8.28	.027	N.S
	Female	20	55.63	7.31		
Religious	Male	20	63.26	14.82	1.48	N.S
	Female	20	68.92	8.59		
Social	Male	20	45.15	9.65	.610	N.S
	Female	20	42.85	13.93		
Theoretical	Male	20	48.57	6.86	.616	N.S
	Female	20	47.46	4.29		
Total	Male	20	395.04	11.07	1.13	N.S
	Female	20	399.44	13.37		

Table value 0.05 = 2.02, 0.01 = 2.72

1. The results of the table No. 1 shows that engineering college Male and Female students for Values factor no. 01 Aesthetic value are listed above The researcher have found that the mean value for male students who showed Aesthetic value was 71.64 and SD is 9.98, Similarly the mean value for female students who showed Aesthetic value is 72.37 and SD is 6.34. The calculated't' value is .273. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Aesthetic value.
2. The results of the table No. 1 shows that engineering college Male and Female students for Values factor no. 02 Economic value are listed above The researcher have found that the mean value for male students who showed Economic value was 66.36 and SD is 12.26 Economic value, Similarly the mean value for female students who showed Economic value is 70.31 and SD is 8.28. The calculated't' value is 1.19. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Economic value.
3. The results of the table No. 1 shows that engineering college Male and Female students for Values factor no. 03 Moral value are listed above The researcher have found that the mean value for male students who showed Moral value was 44.33 and SD is 8.85, Similarly the mean value for female students who showed Moral value is 41.89 and SD is 8.23. The calculated't' value is .994. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Moral value.

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4. The results of the table No. 1 shows that engineering college Male and Female students for Values factor no. 04 Political value are listed above The researcher have found that the mean value for male students who showed Political value was 55.70 and SD is 8.28, Similarly the mean value for female students who showed Political value is 55.63 and SD is 7.31. The calculated 't' value is .027. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Political value.
5. The results of the table No. 1 shows that engineering college Male and Female students for Values factor no. 05 Religious value are listed above The researcher have found that the mean value for male students who showed Religious value was 63.26 and SD is 14.82, Similarly the mean value for female students who showed Religious value is 68.92 and SD is 8.59. The calculated 't' value is 1.48. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Religious value.
6. The results of the table No. 1 shows that engineering college Male and Female students for Values factor no. 06 Social value are listed above The researcher have found that the mean value for male students who showed Social value was 45.17 and SD is 9.65, Similarly the mean value for female students who showed Social value is 42.85 and SD is 13.93. The calculated 't' value is .610. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Social value.
7. The results of the table No. 1 shows that engineering college Male and Female students for Values factor no. 07 Theoretical value are listed above The researcher have found that the mean value for male students who showed Theoretical value was 48.57 and SD is 6.86, Similarly the mean value for female students who showed Theoretical value is 47.46 and SD is 4.29. The calculated 't' value is .616. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Theoretical value.
8. The results of the table No. 1 shows that engineering college Male and Female students for Values are listed above The researcher have found that the mean value for male students who showed value was 395.04 and SD is 11.07, Similarly the mean value for female students who showed value is 399.44 and SD is 13.37. The calculated 't' value is 1.13. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their values.

### ***Hypothesis no -2***

There is no significant mean difference among aesthetic economic, moral, Political, religious, social and theoretical values of high and low socioeconomic status in engineering college students.

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**Table No.2**

Group Statistics						
	SES	N	Mean	Std. Deviation	t	Sig
Aesthetic	High	20	72.18	7.02	.125	N.S
	Low	20	71.85	9.53		
Economic	High	20	68.39	11.39	.032	N.S
	Low	20	68.28	9.86		
Moral	High	20	42.74	8.87	.273	N.S
	Low	20	43.48	8.38		
Political	High	20	56.07	8.11	.327	N.S
	Low	20	55.27	7.47		
Religious	High	20	66.16	10.83	.036	N.S
	Low	20	66.02	13.90		
Social	High	20	41.88	9.50	1.14	N.S
	Low	20	46.14	13.79		
Theoretical	High	20	48.35	6.00	.371	N.S
	Low	20	47.68	5.46		
Total	High	20	395.76	9.48	.75	N.S
	Low	20	398.71	14.72		

Table value 0.05 = 2.02, 0.01 = 2.72

1. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 01 Aesthetic value are listed above The researcher have found that the mean value for high SES students who showed Aesthetic value was 72.18 and SD is 7.02, Similarly the mean value for low SES students who showed Aesthetic value is 71.85 and SD is 9.53. The calculated 't' value is .125. It is not significant. It indicates that there is no significant difference on engineering college high SES and low SES students in their Aesthetic value.
2. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 02 Economic value are listed above The researcher have found that the mean value for high SES students who showed Economic value was 68.39 and SD is 11.39 Economic, Similarly the mean value for low SES students who showed Economic value is 68.28 and SD is 9.86. The calculated 't' value is .032. It is not significant. It indicates that there is no significant difference on engineering college high SES and low SES students in their Economic value.
3. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 03 Moral value are listed above The researcher have found that the mean value for high SES students who showed Moral value was 42.74 and SD is 8.87, Similarly the mean value for low SES students who showed Moral value is 43.48 and SD is 8.38. The calculated 't' value is .273. It is not significant. It indicates that there is no

## **Values and Sex Behavior Attitude among Engineering College Students in Relation to Socio-economic Status**

significant difference on engineering college Male and Female students in their Moral value.

4. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 04 Political value are listed above The researcher have found that the mean value for high SES students who showed Political value was 56.07 and SD is 8.11, Similarly the mean value for low SES students who showed Political value is 55.27 and SD is 7.47. The calculated 't' value is .327. It is not significant. It indicates that there is no significant difference on engineering college high SES and low SES students in their Political value.
5. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 05 Religious value are listed above The researcher have found that the mean value for high SES students who showed Religious value was 66.16 and SD is 10.82, Similarly the mean value for low SES students who showed Religious value is 66.01 and SD is 13.90. The calculated 't' value is .036. It is not significant. It indicates that there is no significant difference on engineering college high SES and low SES students in their Religious value.
6. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 06 Social value are listed above The researcher have found that the mean value for high SES students who showed Social value was 41.88 and SD is 9.50, Similarly the mean value for low SES students who showed Social value is 46.14 and SD is 13.79. The calculated 't' value is 1.14. It is not significant. It indicates that there is no significant difference on engineering college high SES and low SES students in their Social value.
7. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 07 Theoretical value are listed above The researcher have found that the mean value for high SES students who showed Theoretical value was 48.35 and SD is 6.00, Similarly the mean value for low SES students who showed Theoretical value is 47.68 and SD is 5.46. The calculated 't' value is .371. It is not significant. It indicates that there is no significant difference on engineering college high SES and low SES students in their Theoretical value.
8. The results of the table No. 2 shows that engineering college high SES and low SES students for Values factor no. 08 total value are listed above The researcher have found that the mean value for high SES students who showed total value was 395.76 and SD is 9.48, Similarly the mean value for low SES students who showed Social value is 398.71 and SD is 14.72. The calculated 't' value is .75. It is not significant. It indicates that there is no significant difference on engineering college high SES and low SES students in their total value.



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### *Hypothesis no -3*

There is no significant difference in Restrictiveness and permissiveness of sex behavior attitude between boys and girls in engineering college students.

**Table No 3**

Group Statistics						
	Gender	N	Mean	Std. Deviation	t	Sig
Restrictiveness	Male	20	30.15	3.25	1.322	N.S
	Female	20	31.35	2.43		
Permissiveness	Male	20	29.70	2.11	.932	N.S
	Female	20	29.00	2.66		

Table value  $0.05 = 2.02$ ,  $0.01 = 2.72$

The results of the table No. 3 shows that engineering college Male and Female students for sex behavior attitude factor no. 01 Restrictiveness are listed above The researcher have found that the mean value for male students who showed Restrictiveness was 30.15 and SD is 3.25, Similarly the mean value for female students who showed Restrictiveness is 31.35 and SD is 2.43. The calculated 't' value is 1.32. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Restrictiveness of sex behavior attitude.

The results of the table No. 3 shows that engineering college Male and Female students for sex behavior attitude factor no. 02 Permissiveness are listed above The researcher have found that the mean value for male students who showed Permissiveness was 29.70 and SD is 2.11, Similarly the mean value for female students who showed Permissiveness is 29.00 and SD is 2.66. The calculated 't' value is .932. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Permissiveness of sex behavior attitude.

### **Hypothesis no -4**

There is no significant difference in permissiveness and Restrictiveness of sex behavior attitude between High and Low socioeconomic status in engineering college students.

**Table No.4**

Group Statistics						
	SES	N	Mean	Std. Deviation	t	Sig
Restrictiveness	High	20	31.45	2.61	1.56	N.S
	Low	20	30.05	3.06		
Permissiveness	High	20	28.90	2.61	1.21	N.S
	Low	20	29.80	2.07		

Table value  $0.05 = 2.02$ ,  $0.01 = 2.72$

## Values and Sex Behavior Attitude among Engineering College Students in Relation to Socio-economic Status

The results of the table No. 4 shows that engineering college High and Low socioeconomic status students for sex behavior attitude factor no. 01 Restrictiveness are listed above. The researcher has found that the mean value for high SES students who showed Restrictiveness was 31.45 and SD is 2.61, Similarly the mean value for low SES students who showed Restrictiveness is 30.05 and SD is 3.06. The calculated 't' value is 1.56. It is not significant. It indicates that there is no significant difference on engineering college Male and Female students in their Restrictiveness of sex behavior attitude.

The results of the table No. 4 shows that engineering college High and Low socioeconomic status students for sex behavior attitude factor no. 02 Permissiveness are listed above. The researcher has found that the mean value for high SES students who showed Permissiveness was 28.90 and SD is 2.61, Similarly the mean value for low SES students who showed Permissiveness is 29.80 and SD is 2.07. The calculated 't' value is 1.21. It is not significant. It indicates that there is no significant difference on engineering college High and Low socio

### CONCLUSION

1. There is no significant mean difference among aesthetic, economic, moral, political, religious, social and theoretical values of male and female students.
2. There is no significant mean difference among aesthetic, economic, moral, political, religious, social and theoretical values of engineering college students having high and low socioeconomic status.
3. There is no significant difference in permissiveness and restrictiveness of sex behavior attitude between male and female students.
4. There is no significant difference in permissiveness and restrictiveness of sex behavior attitude between engineering college students having high and low socioeconomic status.

### Acknowledgments

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## **Job Stress, Social Anxiety and Social Skills in Male and Female I.T. Executives**

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### **ABSTRACT**

The present study was conducted to investigate the gender difference in job stress, social anxiety and social skills between male and female IT executives. A total sample of 200 I.T. executives (100 males and 100 females) was taken from the private I.T. companies of Gurgaon and Faridabad. Job Stress Survey (Spielberger and Vagg, 1999), Social Skills Scale (Albert, 2005) and Social Anxiety Scale (Liebowitz, 2004) were administered to measure these variables. Data was analyzed by using t-test. Results clearly revealed the significant gender differences in the above measures. Job stress and social anxiety were found high in males while females had better social skills than male IT executives.

**Keywords:** *Job Stress, Social Anxiety, Social Skills, I.T. Executives*

**S**tress is an important psychological concept that can affect health, well being and job performance in negative dimensions (Mojoyinola, 1984; Olayey, 2002). According to Arnold (1995), stress is a word derived from latin word 'Stingere' which means to draw tight. It is considered as a force that pushes a physical or psychological factor beyond its range of stability, producing a strain within the individual. The experience of stress can alter the person's emotional state, the way they think and behave and can also produce changes in their physiological function (Haider, 2008). Lazarus (1966) conceived stress to be a threat of anticipation of future harm, either physical or psychological events that lower an individual self-esteem. It is an affective behaviour and physical response to aversive stimuli in the environment. According to Selye (1976), stress is the non-specific response of the body to the demand made upon it. It puts excessive demands that disturb the physiological, sociological and psychological equilibrium of an individual.

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Stress may be acute or chronic in nature (Akinboye and Adeymo, 2002). It occurs in different forms, i.e., may be psychological, emotional, social or occupational. Job related stress experienced by workers at work is called job stress. There are number of factors, i.e., poor working conditions, excessive work load, shift work, long hours of work, role ambiguity, role conflict, shifting hours, role conflict, poor relations with boss, colleagues or subordinates, risk and danger in work set up etc. that lead to stress.

Certain responses indicate the presence of job stress in an individual or group. It may manifest various symptoms like insomnia, headache, lack of concentration, low morale, high social anxiety, and lack of social skills. Job stress can overwhelm and grows as well to employees who are continually trying to meet their job deadlines (Albert, 2001). This tension to meet competitive demands of society and work deadlines lead to social anxiety. Social anxiety is the fear of interaction with other people that brings on self-consciousness, feelings of being negatively judged and evaluated that sometimes leads to avoidance. This feeling of inadequacy, inferiority, embarrassment sometimes lead to poor social skills. Allen & Madeline (2002) asserted that people who suffer from social anxiety or shyness are not ignorant of social cues but feel embarrassment in social interactions and communication skills. Though there have been research studies that talk about the relationship between stress, social anxiety and social skills (Alex, 2005; Elena, 2006, Angelico, 2013) but the research evidence in relation to these variables pertaining to gender differences is very scarce. Since in current world of information technology both males and females are meeting deadlines of their targets and are under lot of job stress, the need of an hour is to investigate the gender differences in job stress, social anxiety and social skills in IT employees.

### ***Problem***

To explore the gender differences in job stress, social anxiety and social skills in male and female IT executives.

### ***Hypothesis***

There would be significant gender differences in job stress, social anxiety and social skills in male and female IT executives.

## **METHODOLOGY**

### ***Design***

Two group research designs were used to find out gender differences in job stress, social anxiety and social skills among IT executives.

### ***Sample***

The sample of 100 male and 100 female IT executives was selected from IT companies of Faridabad and Gurgaon. The age range was from 27 to 32 years with work experience of 2-3 years.

### Tools

1. **Job Stress Survey (Spielberger and Vagg, 1999)** : It assesses the perceived frequency and severity of occurrence of 30 stressful work related events faced by employees in various situations. This job stress survey consists of three scale and six subscales. Job Stress Index Scale provides an estimate of the overall level of occupational stress.
2. **Social Skills Scale (Albert, 2005)**: It consists of 18 multiple choice items and each item followed by three choices. It measures various components of social skills such as, communication skills, body language, social insight, behaviour and comfort.
3. **Social Anxiety Scale (Liebowitz, 2004)**: It has 16 multiple choice items and each followed by three choices. It assesses the way that social anxiety plays a role in life across a variety of situations.

### Procedure

All the respondents were approached individually. The confidentiality of information was assured. All the questionnaires were administered as per the instructions and after that every scale was scored as per manual. Then the entire data was analyzed by using t-test.

## RESULTS AND DISCUSSION

*Table 1: Mean Difference between Male and Female IT Executives across the Variables under Study*

Variables	Gender	M	SD	t-value
Job Stress	M	36.3	6.6	8.6**
	F	28.4	4.4	
Social Anxiety	M	28.7	5.6	4.8*
	F	24.2	4.4	
Social Skills	M	42.4	7.0	6.2*
	F	46.7	6.7	

\*\* p<0.01, \* p<0.05

The objective of the present study was to investigate the gender differences in job stress, social anxiety and social skills in male and female IT executives. As perusal of results in Table No. 1 clearly revealed that there was significant gender difference in job stress social anxiety and social skills among IT executives. Males reported higher job stress ( $\bar{X}=28.7$ ,  $\sigma=6.2$ ) than females which further led to significantly low social skills to cope up with stress. On the other hand, females had higher social skills (i.e.  $\bar{X}=46.7$ ,  $\sigma=9.2$ ) in terms of adequate body language, social insight to overcome strenuous task, effective communication skill and good comfort between work set-up and personal life. Wong (2008) reported the gender differences in perceived personal stress. Delva (2002) reported doctors having high workload and leading to high social anxiety. Alex (2004) reported positive relationship between social anxiety and high stress as reported by males IT executives in the present sample. It is so because when the individual is

under work stress, doesn't interact with society much, and remains quite isolated in social situations leading to anxiety and lack social skills. This low level of social skills makes their incapable to cope up with work situations and to be balanced in life.

## **CONCLUSION**

The present study in today's corporate world suggests that females despite of having multiple responsibilities at home and work set up as well remain less stressed have low social anxiety and better social skills. The need of an hour is to conduct some workshops by management where they train employees by some life skill training modules for experiencing moderate stress, less anxiety and high social skills.

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**Conflict of Interests:** The author declared no conflict of interests.

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## Planning and Designing of Deaddiction Centre

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Dr. Sunil Basukala<sup>4</sup>

### ABSTRACT

Substance use estimates, however, are liable to change over time, depending upon diverse factors such as availability and cost of the substances in the community, existing legislations and their implementation, social perception and attitude about use of particular substances, peer pressure and other socio-cultural factors. About 122 drug dependence treatment centres or De-Addiction Centres (DACs) have been established by The Ministry of Health and Family Welfare (MOH&FW), Government of India. While most of these government centres are associated with either general hospitals at the district levels (district hospitals or civil hospitals), some have also been attached with departments of Psychiatry at certain medical colleges. Only a few centres (about 42, mainly those in the north-eastern states of the country) receive recurrent grants from the union health ministry. Most others have been dependent on the state governments for the recurring expenditure (on staff salaries, supplies etc.).

**Keywords:** *De-addiction, Psychoactive substance, Morphine*

Psychoactive substance abuse in India continues to be a substantive problem for the individual as well as for the society. One of the foremost essential steps to combat this challenge is to document the extent, patterns and trends of substance abuse to appreciate the magnitude and severity of the problem. Numerous surveys have been conducted since the early 1970s at various levels and in various populations in India to assess the level of psychoactive substance abuse. The prevalence estimates ranged from 0.94 per 1000 population in the earlier studies to 350 per 1000 population in more recent ones.

In the largest general population study conducted till date, current prevalence of alcohol use was 21.4 per cent, cannabis 3.0 per cent, heroin 0.2 per cent, opium 0.4 per cent and other opiates 0.1

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per cent; further, 17-29 per cent of the current users of these substances were found to be using these substances in dependent pattern.

Substance use estimates, however, are liable to change over time, depending upon diverse factors such as availability and cost of the substances in the community, existing legislations and their implementation, social perception and attitude about use of particular substances, peer pressure and other socio-cultural factors.

A study published in a WHO document in 1980 remarked that "...The last point and one which deserves careful consideration is the absence of large-scale heroin or related substance abuse in India". Just four years later, this was contradicted by the same author in view of the rapid increase in heroin dependence in patients attending a de-addiction centre in Delhi. This was followed by newer entrants in the substance abuse scenario: buprenorphine injection, codeine-containing cough syrups, dextropoxyphene and other opioid oral preparations, inhalants, cocaine, and the latest being several "club and rave drugs".

### **THE GOVERNMENT DE-ADDICTION CENTRES IN INDIA**

About 122 drug dependence treatment centres (or De-Addiction Centres —DACs) have been established by The Ministry of Health and Family Welfare (MOH&FW), Government of India. While most of these government centres are associated with either general hospitals at the district levels (district hospitals or civil hospitals), some have also been attached with departments of Psychiatry at certain medical colleges. It is noteworthy that the Union Health Ministry's contribution has been largely limited to providing one-time grants for construction / refurbishment of the buildings. Only a few centres (about 42, mainly those in the north-eastern states of the country) receive recurrent grants from the union health ministry. Most others have been dependent on the state governments for the recurring expenditure (on staff salaries, supplies etc.).

While so far, there is no regular system in place to evaluate the functioning of these centres, the Ministry of Health and Family Welfare has been taking steps to conduct evaluation exercises, mainly through NDDTC, AIIMS and through NIMHANS, Bangalore. In the year 2002 an evaluation exercise was undertaken with support from the World Health Organization (India). Also under the Drug De-Addiction Programme of the MOH & FW, 122 government de-addiction centres in the country have been set up in medical colleges and district hospitals. Evaluation and monitoring exercises have been conducted periodically to examine functioning of these centres as part of a WHO funded activity (in 2002) and as part of a Parliamentary committee query (in 2008). Both the exercises focussed on treatment centre as well as patient characteristics.

## Planning and Designing of Deaddiction Centre

### *Aim and Objectives*

1. To study the existing guidelines and standards related to de-addiction centre
2. To recommend the measure of improvement if any

### **MATERIALS AND METHODS**

1. A systematic review of various studies related to de-addiction centre was performed.
2. Certain exclusion and inclusion criteria were framed to select the articles for the study. The standard data bases for searching the articles were used.
3. Guidelines available on the subject and the search material were studied and analyzed.

### **DISCUSSION**

While planning and implementing substance use treatment services, it is essential to ensure that these services are compatible with the existing health care delivery system. A situation is avoided wherein certain policies and procedures of the De-Addiction centre are at odds with the policies and procedures of the associated hospital. It should also be noted that the policies and procedures at De-Addiction centre are sensitive to the local cultural scenario. For this, it is important that patients and their care-givers are involved not only in the process of clinical decision making at an individual level, but their involvement should also be sought for making policies and procedures of the clinic.

The Centre should preferably have a building of its own. The surroundings should be clean. It should be easily accessible from the outside. This facility should be functionally integrated with district hospital for seamless sharing of facilities of district hospital. The building should have a prominent board displaying the name of the Centre in the local language.

**Entrance:** It should be well-lit and ventilated with space for Registration and record room, drug dispensing room, and waiting area for patients. The doorway leading to the entrance should also have a ramp facilitating easy access for disabled patients, individuals using wheel chairs, stretchers etc.

**Registration:** At a minimum level all patients attending de-addiction treatment services should be registered in a dedicated register and should receive a unique registration number. This service is linked to record maintenance and thus patients' unique registration number should be reflected in all the records of the patient. While most hospitals (of which the de-addiction centres are a part) are expected to have a central registration system, the de-addiction registration number should be **separate** from the hospital registration as this would be important for monitoring and evaluation purpose.

**Waiting area:** The waiting area can be calculated by the general thumb rule of 1 sq meters per patient. Taking the approximate number of patients to be 7 new and 25 old (total 32) with scope

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for further increase in work load, total waiting area is proposed to be 40 sq meters. In addition to the waiting area the centre should have provision for basic facilities such as drinking water and waiting time entertainment such as a TV with cable connection etc.

**Outpatient department:** The outpatient department of the centre should be a functionally separate entity from the Outpatient department of the hospital. All patients would be seen both by the doctor and the counsellor/social worker. Hence rooms need to be provided for both, ensuring adequate privacy during interviews of patients.

**Doctor's chambers:** There should be adequate lighting and ventilation to provide a comfortable environment to the doctor and the patient. The furniture should include one desk and doctor's chair, with one stool and two or three additional chairs.

**Toilets:** There should be one male and one female toilet (WC + wash basin) for the staff. The toilets for the patients and attendants should be made as separate toilet complexes for males and females. Each of these toilet complexes should have one WC and one Indian style lavatory and one wash basin.

**Pharmacy:** If the general hospital, of which the de-addiction centre is a part, has a dispensary, the same may be used for de-addiction centre as well. Otherwise, for dispensing of medications from the De-addiction centre an exclusive pharmacy should be established. In either of the cases, there should be provision for at least three cupboards for storing medications out of which at least one should have double lock and key mechanism to facilitate storage of scheduled drugs like Buprenorphine etc.

**Dispensing room:** Dispensing of medicines Pharmacotherapy plays the central role in the treatment of substance use disorders. All the patients seeking treatment from de-addiction centres should have access to the following medications – free of cost – from the dispensary. If the general hospital, of which the de-addiction centre is a part, has a dispensary, the same may be used for de-addiction centre as well. Otherwise, for dispensing of medications from the De-addiction OPD, a system should be put in place, which allows for monitoring and auditing the dispensing procedure. Only authorized persons (such as a nurse / pharmacist) must be allowed to handle / dispense medicines.

Dispensing room should be a small room located adjoining the exclusive DAC pharmacy to administer drugs to those patients who require the drug to be given under supervision. The drugs and names of patients should be recorded in a separate register and the whole process should be under the supervision of a trained staff nurse or a pharmacist.

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**Administrative area and stores:** There should be a place for the rooms of Administrative officer and accounts personnel, if these staff members are exclusively meant for the centre and are not shared with the district hospital. Two rooms may be provided for administrative usage, and one for accounts and finance department. The stores require a bigger area for storage of medical, general and linen stores.

**Record maintenance:** Since substance dependence is seen as a chronic non-communicable disease, the patients who report to a centre like this usually expected to have a prolonged outpatient follow-up along with a few inpatient treatment episodes. Thus, maintenance of records remains a very important activity.

### EXPECTED PATIENT LOAD

It is envisaged that a district hospital would attract at least 3 to 5 new patients and 25 to 30 old patients in the outpatient clinic on a given day. Based on the above premise concerning the essential requirement for a basic substance abuse treatment centre providing outpatient care, a 10-bedded inpatient facility, minimum laboratory backup and referral system the following staff is recommended.

**In- Patient Area Wards:** Ten bedded ward can be proposed in the hospital for the De Addiction Centre. These beds should preferably be in an area away from the general traffic to ensure privacy for such patients. At least two beds should have railings and/or provision for restraining violent patients. The ward should have provision for round the clock nursing. There should be a well stocked and equipped nursing station, with file racks, cupboard for storage, water supply, etc. The following is a list of different inclusions in the ward:

S.NO	DEPARTMENTS	SPACE (M <sup>2</sup> )
1.	<b>Outpatient Area</b> Consultation chambers Counselling room Waiting area Staff toilets Patient toilet complex Pharmacy Drug dispensing room Records and registration room Outpatient registration Admission office Medical records office Storage room	 18 18 40 12 12 36 24 12 12 12 24 36
2.	<b>Administrative area and stores (only if not shared with the hospital)</b> Room for Officer / Sister in charge	 12

## Planning and Designing of Deaddiction Centre

	Room for accounts personnel	12
	Store room	36
3.	<b>Wards</b>	
	Beds (8 m2 per bed X 10 beds)	80
	Nursing station with toilet	18
	Interview / treatment room	12
	Doctor's Duty room	18
	Nurses Changing room	12
	Ward store	24
	Patients relatives waiting area with toilet	24
	Sluice room	12
	Group D room	12
	Ward pantry with drinking water facility	12
	Staff toilets	12
	Patient toilet complex	36
	Recreation/rehabilitation/activity room	24
	<b>Subtotal</b>	<b>606</b>
	<b>Add 30% extra for circulation space</b>	<b>182</b>
	<b>Sub Total</b>	<b>788</b>
	<b>Add 10% for walls</b>	<b>80</b>
	<b>Total covered Area</b>	<b>866</b>

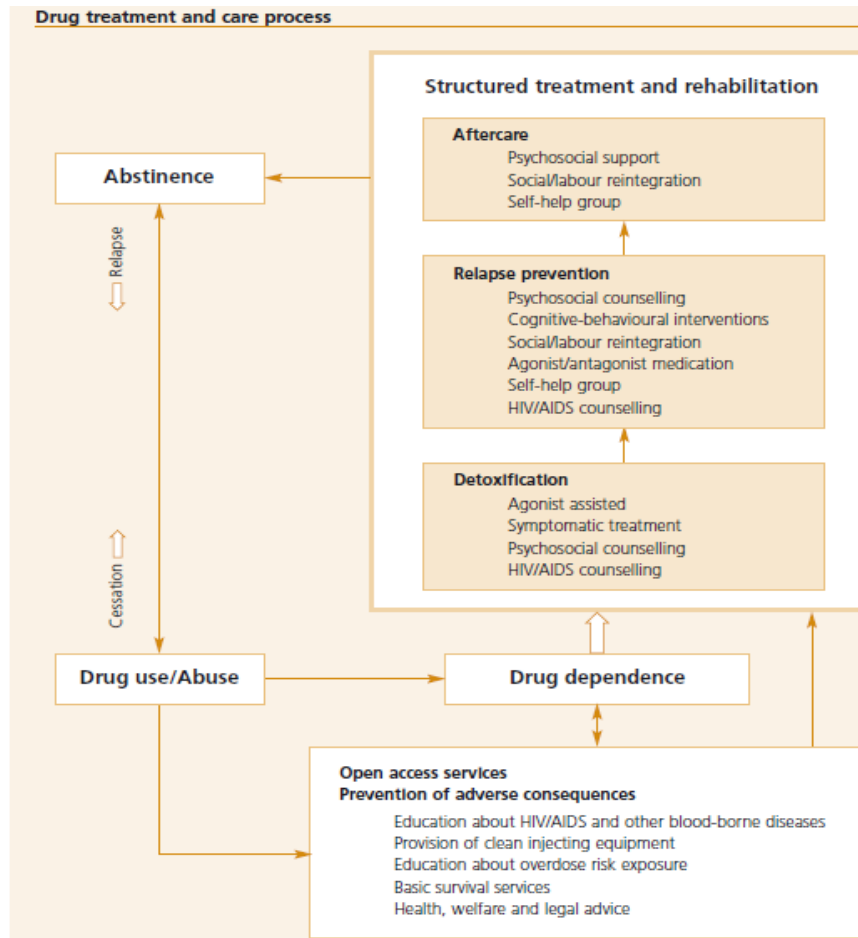
### SERVICES

#### *Outpatient services*

While these doctors may encounter many patients with substance use disorders in their routine—general clinics, such patients should be referred to / encouraged to attend, the exclusive and dedicated outpatient clinic for substance use disorders. Thus all hospitals with Government De-Addiction centres should offer an exclusive outpatient De-addiction clinic with following care:

1. ***Counselling / psychosocial interventions / psycho-education***: All patients (and their attendants, if available and only if the patients agree to involve them) assessed by the trained doctor, should receive Counselling / psychosocial interventions / psycho-education, as per the clinical needs. For this purpose it would be necessary to involve a trained medical social worker / counsellor / psychologist. Succinct categorizations of treatments for substance abuse are surprisingly difficult to develop. In the present section, a summary of the main types of structured treatment are offered. Structured treatment characterizes services that are based on a formal assessment, the development, monitoring and review of individual plans for client care and a programme of medical treatment and/or counselling services. A schematic description of a care process is shown in the box below:

## Planning and Designing of Deaddiction Centre



- Emergency Services** In those de-addiction centres which are a part of the general hospital, the emergency de-addiction services may be provided by the emergency department of the hospital. While most such emergency set-ups have provision of doctors / nurses and necessary supplies, these should be geared towards providing emergency services related to substance use disorders. The emergency set-ups should be geared to handle emergency situations commonly encountered in the area of substance use disorders viz. acute intoxication / overdose, withdrawal syndromes, adverse drug reactions etc.
- Laboratory services:** All the de-addiction centres should have access to basic laboratory services. It is not necessary that these services be established exclusively for de-addiction patients but these services may be incorporated with laboratory services of the general hospital. Toxicology Laboratory should be established with all the other routine laboratory tests required for the treatment.
- Psychosocial interventions:** All centres should be equipped with facilities to provide psychosocial interventions at both the levels of care: Outpatient and In-patient and in both the settings: in group settings and in individual settings. Family members must also be involved in psychosocial interventions as much as possible. While the specialized psychotherapies may be out-of-scope for most of the centres, trained manpower and other facilities must be available for the following psychosocial services:

## Planning and Designing of Deaddiction Centre

1. Basic psycho-education about the nature of illness, importance of treatment adherence
2. Motivation Enhancement
3. Reduction of high-risk behaviour
4. Brief Interventions
5. Relapse Prevention
6. Counselling for occupational rehabilitation

**5. Referral / Consultation / Linkages** While a comprehensive treatment programme should address multiple needs of the patient, no single de-addiction centre alone can provide all the services a patient requires. Consequently, it is imperative for the centres to establish and maintain referral and consultation linkages with other facilities and services.

### *Other Special Requirements of the Centre*

**Water supply:** The centre should have provision for 24 hours water supply. The bathrooms, wherever provided should be fitted with geysers and/or other equipments as required to ensure supply of hot water during cold season.

**Waste management:** All necessary steps should be taken to ensure proper segregation and disposal of bio medical waste in the centre. The disposal of Bio medical waste may be clubbed with Bio Medical Waste management in the rest of the hospital.

**Security services:** Security must be adequately provided both in wards and in outpatient area. Some of such patients can turn violent at times and the security personnel need to be trained in handling such outbursts. The work of the security service should be augmented by intelligent facility design as had been suggested earlier to minimize chances of illegal substance trafficking, patients escaping from the ward or breakage of ward property by violent patients.

**Signage and Publicity:** Prominent signage and publicity boards should be put up to make the public aware of such services in the hospital.

**Shared services:** The following services are proposed to be shared with the main hospital:

1. Emergency
2. Laboratory and Radio diagnostic services
3. Kitchen / dietary services
4. Laundry services
5. Housekeeping and other support services

**Furniture:** The centre must be adequately furnished so that the minimum standards of services can be maintained. The table 2 provides a suggestive list of furniture. This list has been guided by the Indian Public Health Standards (IPHS) list of furniture.



## **STAFFING**

### ***General Physician / General Duty Medical Officer (GDMO)***

Due to a dearth of psychiatrists in the prevailing circumstances, any qualified physician with specific training in substance abuse treatment can be a team leader. A Psychiatrist is more equipped to be a team leader for a de-addiction unit, because of the professional training he/she would have received. His/her job will be to diagnose and treat substance use disorders, coordinate the services, manage the team, liaison with other agencies including NGOs and provide care at the OPD and in-patient levels. If the leader happens to be psychiatrist he/she would be equipped to recognize and deal with psychiatric co-morbidity too.

### ***Nursing personnel***

Indian Nursing Council norms require 1 staff nurse for every 5 beds in a non-teaching hospital. For a 10 bedded unit of a district hospital, this translates into 2 staff-nurses. However, at least 3 staff-nurses are required for round the clock patient cover in a dedicated unit, with 1 leave reserve. One of these could be nurse in-charge who is expected to look after administrative responsibilities like making duty rosters, keeping leave records, addressing grievances of patients and nurses and coordinating the treatment plan of the patients with the entire health delivery unit. The additional staff nurse for leave reserve will be present in the OPD for any procedures including dispensing medicines, doing dressings and giving injections when not in the ward. Thus, 24-hour coverage of the ward will be done in the ratio of 1:1:1 + 1 in-charge. In the ward the nurses are expected to carry out various functions including dispensing medicines, keeping a record of various patient parameters, ensuring cleanliness and provide basic counselling. While the nurses from the general pool of nurses at the hospital can also be posted at the DAC, it would be advisable to post only those nurses who have received specific training on substance use disorders.

### ***Social workers/counselors***

Social workers and counsellors are the very important category of staff at the DAC. Their primary duties would include counselling and other psycho-social interventions at the outpatient and inpatient level. Additionally, they can also be involved in generating community awareness by holding public meetings and interacting with community leaders. They would form the mainstay of the psycho-social interventions and would also be responsible for the motivation of patients and their psychological rehabilitation. They could also be involved in making education material including posters and leaflets.

### ***Security staff***

The above mentioned category of the staff would be required exclusively for the de-addiction centre. Additionally, some other staff members would also be required to help running the centre smoothly. However, all these additional staff can be shared with the district hospital and hence would not be performing exclusive duties at the de-addiction centre

## CONCLUSION

In conclusion, the present study highlights that there have been major shifts in the patterns of substance abuse as documented in subjects registered in a public sector drug de-addiction centre in north India over three decades from 1978 till 2008. The number of people registered in the de-addiction centre increased eight-fold. There was a significant increase in emergence of newer substances of abuse, and a significant increase in prescription drugs and poly substance dependence in recent years. The paucity of properly trained professionals and sound physical infrastructures are barrier to the development and delivery of effective treatment services to drug users. The constraints are still more when dealing with special populations like substance using women and adolescents. Building teams of physicians and nurses as well as development of specialized sound infrastructure is the need of current scenario for quality care of patients with drug addiction in the country.

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## Qualitative Analysis of Modified Hand Test

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### ABSTRACT

Qualitative analysis of modified Hand Test was carried out on 500 participants further bifurcated into 350 normal, 50 maladjusted, 50 neurotic and 50 psychotic participants. Their ages ranged from 11 years to 90 years with mean age of 34.44 SD (17.34). The qualitative analysis based up on seventeen categories which includes ambivalent, automatic phrase, cylindrical, denial, emotion, gross, hiding, immature, impotent, inanimate, movement, oral, and perplexity, sensual, sexual and original. Original Purposive sampling technique was used. Modified Hand test with four new adapted stimulus was administered in accordance with described instructions by its author. Testing the limit procedure was applied only for psychotic group. Post-test inquiry was held to clarify certain responses. The results of the study depicted interesting features which differentiates four groups. E.g. normal group did not produce any sexual, hiding, repetition responses. More number of repetitive responses were found in mal adjective and neurotic groups. Certain new areas were also explored like introjections produced by psychotic group. Need for altruism by doctors sub group of normal population. Direction by teachers. Interesting results are expected with other different sample and are likely to provide insight in order to understand human behavior in tradition of idiosyncratic approach.

**Keywords:** *Qualitative Analysis, Modified Hand Test*

**H**and test was developed by Edwin E Wagner in 1962 and new norms for children and adolescents were introduced in 1983. Hand test has gained reputation of projective and diagnostic measure and became popular amongst clinicians and researchers because it has the capacity to measure various aspects of Human Personality and Behavior. Despite being projective test, it offers objectivity in terms of well-defined quantitative scoring systems and on this aspect it enjoys leading role amongst other projective techniques, because subjectivity in terms of interpreting responses is a major criticism on projective techniques (Anastasi, 1997), (Maha Nazir, 2008). In addition to quantitative scoring categories the author of the Test had also

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proposed 17 qualitative scoring categories which also includes certain defense mechanisms like denial.

Hand test has four major domains i.e. Interpersonal which encompasses affection, dependence, communication, exhibition, direction and aggression. The second major category is Environmental, its sub categories are action, acquisition and passive. The third main domain of mal-adjective category represents neurotic protocol which includes tension, crippled and fear responses. Whereas the fourth main domain of withdrawal category represents psychotic protocol and consists of description, fail and bizarre. (Wagner, 1983)

*Qualitative scoring categories have also been described and these include*

- Ambivalent: e.g., Could be hitting someone, thumb is in wrong place
  - Automatic phrase e.g., She is showing off her ring, I guess that's all I see
  - Cylindrical: e.g., Plumber screwing in a pipe
  - Denial: e.g., Shaking hand, No that is the wrong hand
  - Emotion: e.g., Real happy, just bursting right out with joy
  - Gross: e.g., Hand has brass necklace on it
  - Hiding: e.g., No one can copy her answer
  - Immature: e.g., Patting a dog
  - Impotent: e.g., These are too hard for me
  - Inanimate: e.g., A beautiful hand like a statue
  - Movement: e.g., Like it a folding and unfolding, closing and opening
  - Oral: e.g., Has a fork in his hand for eating
  - Perplexity: e.g., He, She is puzzled, difficult in generating response
  - Sensual: e.g. He is enjoying and playing with his fingers
  - Sexual: e.g., Grabbing a women
  - Original e.g. Knitting with her fingers
- Repetition e.g. previous responses is given again

During modification process of Hand test a total of ten stimulus were initially selected by a panel of professionals, out of which four stimulus were adapted after try out study on a sample of 100 participants (50 normal and 50 psychotic). Stimulus were selected on the basis of their capacity to generate responses in more scoring categories and it is believed that the adapted stimulus are generally used by people of Pakistan as non-verbal communication cue, hence the modified version of Hand test will measure cultural input as claimed by Anastasi (1986) “no single test can be entirely culture free and its results are based on norms of that population which are prone to favor to its inhabitants.” It was also believed that new projective techniques should have specific percept which means that stimulus should measure specific aspects of personality rather than overall personality and should have the ability measure some defense mechanisms (Paul Kline, 1986).

## Qualitative Analysis of Modified Hand Test

Most of the researches have been carried out on quantitative scoring categories offered by its author and literature is almost silent on qualitative scoring categories of Hand test except the data presented in Hand test manual. It is therefore considered viable to have insight into richness of content based on qualitative categories with the objective to explore certain new areas and dimensions of personality.

### **METHOD**

#### *Sample*

The sample of this study consisted of 500 participants which was further bifurcated into four major groups i.e. normal which were 350 with equal proportion of males and females, their age ranging from 10 to 80 years with the mean age of 37.01 and (SD) 18.6 . The second group consisted of 50 participants i.e. 42 males and 8 females their age ranging from 11 to 46 years with mean age of 20.43 and SD (10.8), these participants had adjustment problems at home as well as at educational institutions as reported by their teachers and administrative staff. The third group consisted of neurotic participants and further divided into three sub group with almost equal number of males and females, in neurotic anxiety their age ranging from 16 to 37 with mean age 34 and SD (9), in neurotic Obsessive Compulsive Disorder, their age ranged from 23 to 30 years with mean age as 36 and SD (9), in neurotic fear their age ranged from 11 to 45 years mean age as 28 and SD (12). They were diagnosed patients of anxiety disorder, obsessive compulsive disorder and phobic disorder. The fourth group consisted of 50 psychotic patients bifurcated into three sub groups with almost equal number of males and females and were diagnosed patients of schizophrenia age ranging from 16 to 57 years with mean age as 31 and SD (11), bipolar age ranging from 21 to 56 years old with mean age as 35 and SD (10) and depression age ranging from 15 to 54 years with mean age as 30 and SD (10), they all were diagnosed by Psychiatrists and Clinical Psychologists.

#### *Procedure*

Purposive sampling technique was used to select participants. The instrument was administered individually in accordance with standardized procedures in Urdu. The scoring booklet was translated into Urdu by a panel of experts. Ethical procedures which includes consent and debriefing were followed. Only psychotic subjects were offered with the example of Hand shake in order to take advantage of testing the limits procedure (Anastasi, 1997) and prompt was also offered only in the beginning but was not followed later on. After an interval of 100 seconds the new card was presented and if response was not offered during this period it was scored as fail. Frequency counts were made in accordance with qualitative scoring categories however scoring categories were omitted where the score was too low. During the content analysis of responses certain new categories were identified and have been added.

## Qualitative Analysis of Modified Hand Test

### RESULTS

Results have been computed in frequency counts/ percentages along various qualitative scoring categories for normal, maladjusted, neurotic and psychotic groups in the following manner.

*Table 1, Data for the Qualitative Scoring Categories, Normal Group (N=350)*

SNO	Ambivalent			Automatic Ph			Cylindrical			Hiding			Immature			Impotent			Movement			Oral			Perplexity		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1	23	18	41	4	0	4	0	0	0	0	0	0	3	5	8	0	0	0	2	1	3	0	0	0	0	1	1
2	14	10	24	5	1	6	0	0	0	0	0	0	6	6	12	2	4	6	10	9	19	0	0	0	0	1	1
3	9	8	17	3	0	3	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0
4	11	8	19	2	2	4	0	0	0	0	0	0	3	2	5	0	0	0	11	8	19	0	0	0	0	1	1
5	5	8	13	2	1	3	1	0	1	0	0	0	3	3	6	42	55	97	5	4	9	0	0	0	1	0	1
6	15	18	33	0	1	1	0	0	0	2	6	8	1	1	2	1	1	2	4	2	6	2	0	2	1	0	1
7	13	9	22	1	0	1	4	6	10	3	0	3	6	4	10	1	1	2	4	2	6	2	3	5	0	0	0
8	13	10	23	2	2	4	1	0	1	1	2	3	13	7	20	2	2	4	1	2	3	12	11	23	0	0	0
9	7	7	14	1	2	3	0	0	0	3	1	4	10	9	19	16	17	33	7	5	12	0	0	0	2	0	2
10	9	6	15	1	1	2	5	4	9	0	0	0	8	5	13	2	3	5	1	0	1	0	0	0	0	0	0
11	5	3	8	1	0	1	1	0	1	2	4	6	12	9	21	3	4	7	8	2	10	0	1	1	1	0	1
12	6	5	11	0	1	1	0	0	0	0	0	0	2	2	4	0	1	1	5	1	6	1	2	3	1	0	1
13	16	5	21	0	0	0	0	0	0	0	0	0	4	0	4	1	0	1	5	1	6	1	2	3	0	1	1
14	6	7	13	0	1	1	0	0	0	0	0	0	3	2	5	1	2	3	3	0	3	0	0	0	1	1	2
Total	152	122	274	22	12	34	12	10	22	11	13	24	75	56	131	71	90	161	66	37	103	18	19	37	7	5	12

Sensual			Repetition			Introjections			Compensation			Oppositional			Religiosity			Original		
M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1	0	1	2	0	2	2	2	4	0	0	0	0	0	0	2	2	4	0	0	0
0	0	0	3	5	8	1	0	1	1	0	1	2	0	2	0	1	1	3	0	3
0	0	0	2	5	7	0	1	1	0	0	0	0	0	0	5	3	8	0	0	0
1	0	1	3	3	6	1	2	3	0	0	0	2	0	2	0	2	2	2	0	2
3	0	3	8	5	13	1	0	1	1	0	1	0	0	0	2	2	4	3	6	9
0	0	0	7	4	11	0	0	0	0	0	0	0	1	1	1	1	2	2	1	3
0	0	0	0	5	5	0	0	0	4	1	5	1	0	1	4	3	7	1	3	4
0	0	0	1	4	5	0	0	0	1	1	2	1	0	1	3	2	5	3	0	3
1	1	2	3	8	11	0	0	0	1	1	2	1	0	1	5	11	16	0	2	2
1	0	1	1	8	9	1	0	0	0	1	1	0	0	0	34	22	56	0	1	1
0	0	0	5	13	18	0	0	0	0	0	0	0	0	0	10	5	15	5	3	8
2	1	3	10	6	16	0	0	0	0	0	0	0	0	0	4	2	6	4	2	6
0	0	0	4	4	8	0	0	0	0	0	0	0	0	0	33	29	62	9	1	10
0	0	0	5	6	11	1	1	1	2	0	2	0	0	0	20	15	35	3	2	5
9	2	11	54	76	130	7	6	11	10	4	14	7	1	8	123	100	223	35	21	56

Qualitative analysis was carried out along with 17 qualitative categories, after going through content analysis of the responses of Pakistani sample of Normal, maladjusted, neurotic and psychotic, certain new qualitative aspects are explored and incorporated in the present study. These are related to Pakistani culture e.g., Religiosity and some defense mechanisms like introjections, opposition, compensation, projection, need for affiliation, need for achievement

### Qualitative Analysis of Modified Hand Test

and altruism, etc. However only 16 categories were retained, where the input was in reasonable quantity. The qualitative data provides insight into the dynamics of mind-set, exposure and experiences of respondents, e.g., a peasant who had been involved in his role of farmer throughout life gave responses in accordance with his experiences and when sequence analysis was carried out (a traditional method), responses revealed around his previous way of handling the environment and pattern of dealing with others, few responses include bringing grass for animals, preparing land for dipping seeds etc. A soldier and a mechanic just cannot go out while responding from their own way of life e.g. mechanic responded on card 12 that asking for a certain number bolt. Difference in responses were also oriented from Normality to Maladjustment, neurotic to psychotic groups, their brief description is appended below.

274 responses came out in ambivalent category of modified Hand test. They gave responses having origin of indecisiveness or contradictory in nature, e.g., Different two responses of a person on card one also indicate bipolar pattern of the individual. '*Salam le raha hai (shaking hand) Thappar maar raha hai (slapping)*'. Gender differences were also found e.g., in the ambivalent category females were constituting 45% and males were 55%. These responses were not equally distributed along with various stimulus e.g., the highest constellation of responses in ambivalent category was on stimulus one followed by stimulus two, six and thirteen respectively. The second highest score obtained by normal population came out in Religiosity i.e. 223. Here the major share was contributed from newly introduced stimulus 10, 13 and 14 respectively. The third main category remained impotent i.e. 161, here the inverse ratio was found between male and female and female exceeded with 55% to male, 45%. Here the major portion of responses was contributed from stimulus five. It is to highlight in quantitative data the responses on this stimulus was interpreted as crippled, this has reflected the stimulus constancy (pull of stimulus) however is matched with inner dynamics of personality. Almost equal number of responses were obtained by immature and repetition categories i.e. 131 and 130. Here male remained relatively more immature constituting 57% whereas females were 43%. The contribution of responses came out from stimulus 11 (newly introduced stimulus), eight and nine. Females were more in number and constitute 58% as compared to males with 42%. A total of 103 responses were found in movement category, out of which 65% were male and 35% were female. The major contribution of responses were from stimulus two, four, nine and eleven (Newly introduced stimulus) respectively. The lowest score was obtained in opposition i.e. eight followed by introjections and sensual i.e. 11 and compensation i.e. 14.



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**Table 2, Data for the Qualitative Scoring Categories, Maladjustment Group (N=50)**

	Ambivalent			Cylindrical			Hiding			Immature			Impotent			Movement			Oral			Sensual			Repetition			Introjections			Compensation			Oppositional			Religiosity			Original			
SNO	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T				
1	1	1	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
2	3	1	4	1	0	1	0	0	0	0	0	0	3	0	3	1	0	1	0	0	0	0	0	0	1	1	2	0	1	1	0	0	0	2	0	2	0	0	0	0	0	0	
3	1	1	2	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4	2	0	2	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	0	0	0	1	0	1	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5	1	1	2	0	0	0	0	1	1	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	3	0	3	0	0	0	0	1	0	1	0	0	
6	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	5	0	5	0	0	0	2	0	2	0	0	0	2	0	2	1	0	1	
7	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	11	1	12	0	0	0	0	0	0	2	0	2	1	0	1	0	0	0	
8	0	1	1	2	0	2	0	0	0	2		2	1	0	1	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9	1	0	1	0	0	0	0	1	1	2	0	2	6	0	6	2	0	2	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	
10	2	0	2	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	10	0	10	0	0	0	
11	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2	1	0	1	0	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	2
12	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	
13	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	6	0	6	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	
14	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	2	0	2	1	0	1	0	0	0	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Total	17	6	23	3	0	3	1	2	3	8	1	9	25	0	25	12	0	12	4	0	4	1	0	1	57	3	60	0	1	1	5	0	5	4	0	4	25	0	25	5	0	5	

It is pertinent to mention here that number of categories were reduced to 14. The highest 60 number of responses were found in repetition by maladjusted group, followed by 25 number of responses each in immature and religiosity i.e. 25 and 23 number of responses were found in ambivalent category. Lower number of responses were found in introjection, sensual, ambivalent, cylindrical, oppositional, and oral and movement.

**Table 3, Data for the Qualitative Scoring Categories, Neurotic Group (N=50)**

S NO	Ambivalent			Cylindrical			Hiding			Immature			Impotent			Movement			Oral			Perplexity			Sensual			Repetition			Introjection			Compensation			Oppositional			Religiosity			Original		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T						
1	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0		
2	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
3	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	2	0	0	0	0	1	1	0	0	2	0	2	0	0	0	0	
4	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1	
5	1	2	3	0	0	0	0	0	0	0	0	0	5	5	10	0	1	1	0	0	0	1	0	1	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
6	1	2	3	0	0	0	0	1	1	0	0	0	1	0	1	0	1	1	0	0	0	0	1	1	0	0	1	5	6	1	0	1	0	0	0	0	0	1	1	1	2	0	2	2	
7	4	1	5	0	0	0	0	1	1	1	1	2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	3	3	6	0	0	0	0	0	0	0	1	0	1	2	0	2	0	0	0
8	2	1	3	1	0	1	0	0	0	0	0	0	2	1	3	0	1	1	1	2	3	0	3	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	
9	2	0	2	0	1	1	0	0	0	1	2	3	7	1	8	2	1	3	0	0	0	0	1	1	0	1	1	2	1	3	0	0	0	0	0	0	0	0	1	0	1	0	0	0	
10	4	0	1	0	1	1	0	0	0	0	0	4	1	5	0	0	0	0	0	1	1	1	0	1	0	0	1	4	5	0	0	0	0	0	0	0	0	0	4	2	6	0	1	1	
11	2	0	2	0	0	0	0	0	0	0	1	1	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3	5	8	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0
12	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	1	0	1	2	3	1	0	1	0	0	0	0	0	0	1	2	3	1	0	1	
13	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	4	4	1	0	1	0	0	0	0	0	0	2	2	4	0	1	1	
14	2	2	4	0	0	0	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	1	0	1	2	0	2	2	0	2
Tot	20	13	33	1	2	3	0	3	3	3	4	7	20	8	28	5	8	13	3	3	6	5	6	11	1	1	2	15	34	49	3	0	3	0	0	1	2	0	2	18	9	27	3	7	10

It is to highlight here that number of categories were reduced to 15. Highest 49 number of responses were found again in repetition category by neurotic group which include 69% female and 31% male followed by ambivalent 33 in number responses 61% male and 39% female, impotent 28 number of responses, 71% male and 29 % female and religiosity 27 number of responses, 67% male and 33% female respectively. Lower number of responses were obtained

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by neurotic group in hiding, cylindrical, oral and introjection with three each responses and sensual and compensation with two responses in each category.

**Table 4, Data for the Qualitative Scoring Categories, Psychotic Group (N=50)**

	Ambivalent			Cylindrical			Immature			Impotent			Movement			Oral			Perplexity			Sensual			Repetition			Introjection			Compensation			Oppositional			Religiosity		
SNO	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T			
1	3	1	4	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0			
2	0	2	2	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	0	1	0	1	1		
3	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	4	3	7	0	0	0	0	0	0	0	0	3	2	5		
4	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	4	3	7	0	0	0	1	0	1	1	0	1	3	0	3		
5	1	1	2	0	0	0	0	0	0	4	4	8	1	0	1	0	0	3	0	3	0	0	7	5	12	0	0	0	1	0	1	1	0	1	2	0	2		
6	4	5	9	0	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	0	0	7	6	13	1	0	1	0	0	0	1	0	1	2	0	2		
7	3	3	6	0	0	0	0	1	1	1	1	2	1	0	1	0	0	0	0	0	0	0	5	4	9	0	0	0	0	0	0	0	1	1	1	0	1		
8	2	6	8	2	0	2	5	3	8	3	0	3	0	0	0	3	2	5	0	0	0	0	5	6	11	8	0	8	0	0	0	0	0	0	1	0	1		
9	0	1	0	1	0	0	0	0	0	5	2	7	1	0	1	0	0	1	0	1	0	0	5	5	10	0	2	2	0	0	0	0	0	0	1	1	2		
10	2	1	3	0	0	0	0	1	1	2	1	3	0	0	0	0	0	0	0	0	1	1	2	5	5	10	5	3	8	0	0	0	0	0	0	0	0		
11	3	1	4	2	1	3	2	0	2	0	1	1	0	0	0	1	1	2	0	2	0	0	6	6	12	2	1	3	0	0	0	0	0	0	1	0	1		
12	2	2	4	0	0	0	0	1	1	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	8	9	17	0	0	0	0	0	0	0	1	0	1		
13	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	5	5	10	0	0	0	0	0	0	0	5	5	10		
14	1	1	2	1	0	1	0	1	1	0	0	0	0	1	1	0	1	1	0	1	0	0	6	5	11	1	0	1	2	4	6	0	0	0	0	0	0		
Total	22	26	48	6	1	7	7	7	14	21	10	31	3	1	4	6	5	11	9	0	9	2	3	5	71	62	133	17	6	23	4	4	8	4	1	5	20	9	29

The highest 133 number of responses were found in repetition by psychotic group constituting 53% males and 47% females followed by 48 number of responses in ambivalent category consisting 46% males and 54 % females, 31 number of responses were found in impotent category out of which 68 % were male and 32% were female and 29 number of responses were found in religiosity category where 72% were male and 28% were female.

## DISCUSSION

### (Normal group)

Qualitative analysis of stimulus of modified Hand test revealed that there were difference of gender constituting percentages of responses though the difference were not much. E.g. more immature were male than females, similarly more number of responses were given by male in movement category, they also scored more in religiosity. New dimensions e.g. need achievement, need for affiliation, altruism were explored and persons belonging to health professions e.g. doctors projected altruism. Teachers demonstrated direction, orientation.

Contribution of new stimulus were also identified and reflected cultural impact, more number of responses were given in the context of religion on stimulus 10 and 13. There were some contribution in this regard of stimulus three and the same has been identified for the first time in the present study. Another category of oppositional was also identified, such persons tend to adapt an oppositional stance which is an indication of their inability to deal effectively with the outer environment especially with authority figure. This also revealed from their brief case histories during the post- test probe such responses were identified on stimulus four which

### Qualitative Analysis of Modified Hand Test

contains father percept and stimulus seven. It is pertinent to mention that there was hardly any response found in sexual category however few responses were found in the sensual category. This trend is otherwise representation of normal individuals and characteristics of people of this region.

#### *(Maladjusted Group)*

Pattern and sequence of responses have been changed here as highest scoring category which is characteristic of this group remained repetition and an indication of feeble mindedness, lack of intellect and flexibility. However this pattern of repetition and religiosity may also be an indication of covering up mechanism by this group, they have also given more number of responses in description category in quantitative data where they only described the position of stimulus instead of responding about the action. It is to highlight when maximum number of responses came out as repetition, the quality of responses is also compromised.

#### *(Neurotic Group)*

The similar pattern have been found in terms of manner of responses of these two groups of maladjustment and neurotics. Both have higher repetition responses. Here again, male supersedes females in certain category like religiosity, impotence etc. Hiding was also observed from both males and females. This hiding has been found in addition to description responses, it is to highlight that hiding was generally found on stimulus six where the pull is for aggression response and this is an indication of effort to control their id impulses of aggression.

#### *(Psychotic Group)*

They also demonstrated the same pattern of repetition as was found in maladjusted and neurotic group, however it is interesting to note that in spite their inability to deal effectively and meaningfully with their immediate environment they also gave responses in religious context to somewhat reasonable proportion and it appeared that they tried to get some support of religion. The same can be interpreted as a covering mechanism for their id impulses of sexual and aggression. This perhaps was also observed during the process of test administration and probe. It is to note that this group gave more number of responses in ambivalent category which depicted their inability to discriminate external stimuli with clarity. Defence mechanism of introjection appeared more frequently. This reflects their ego centric approach towards life and is a characteristic of this group.

### **LIMITATIONS**

The newly introduced stimulus have cultural reference and it was expected that these stimulus are representation of responses in terms of nonverbal cues by the people of this region. Result would have been more conclusive if the modified Hand test was administered to population of other cultures and countries.

## IMPLICATIONS

As cited above most of the studies previously conducted on this instrument are based on quantitative scoring categories, the present study is likely to pave the way to carry out qualitative studies, hence it will provide more insight in understanding dynamics of human functioning.

### Recommendation

In future studies qualitative analysis of modified Hand test may be carried out with divergent sample and with different cultures. It is also recommended that other qualitative analysis may be incorporated like Interpretative phenomenological responses.

## CONCLUSION

Qualitative and sequence analysis of data has provided interesting results and each group of sample gave responses in different qualitative categories which are considered typical of them, it provides insight about personality integration and configuration of normal, maladjusted, neurotic and psychotic groups.

### *Acknowledgments*

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### *Conflict of Interests*

The author declared no conflict of interests.

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## **Creativity among the Students of Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas**

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### **ABSTRACT**

In the present study, the researchers have attempted to assess the Creativity among 770 students of JNV and KV comprising 320 from JNVs and 450 from KVs. There was a significant difference between the students of JNV's and KV's on Creativity in favour on JNV' students. While boys and girls of JNV's did not differ on Creativity. Among the students of KVs, the boys and girls differed significantly on creativity in favour of boys. Finally, there was no significant difference between the boys and girls of JNV's and KV's put together on Creativity. The implications of nurturing creativity among students are discussed.

**Keywords:** *Creativity, Students, Jawahar Navodaya Vidyalayas, Kendriya Vidyalayas*

**J**awahar Navodaya Vidyalayas and Kendriya Vidyalayas are managed by the Government of India. The former is a residential school set up, while the latter is a non-residential set up. The Navodaya Vidyalaya Scheme was started during the year 1985-86 and is managed by Navodaya Vidyalaya Samiti which is fully financed by the Government of India. These schools were started to identify and nurture the rural talent of the country. While, the Kendriya Vidyalayas aim is to cater to the educational needs of the children of Central Government Employees, which predominantly is located in urban centers.

There are 596 Navodaya Vidyalayas all over the country, while there are 978 Kendriya Vidyalayas in the country. The admission process for JNV is through a selection test at the district level, where only 80 students are selected for class VI. While, in Kendriya Vidyalaya students are given admission only to the children of Central Government employees. Students get selected based on computerized lottery system. Getting admission to either JNV or KV is a matter of prestige for children as it is generally considered by the public. They both are affiliated to CBSE. The teachers of both the schools are selected rigorously and they are transferable

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throughout the country. The teacher training programmes are also given importance and they both get quality facilities and they are paid as per the norms of the Government of India. Since JNVs and KVs have the best teachers, it is worthwhile studying their influence on the manifestation of creative potential among their students.

## **REVIEW OF LITERATURE**

Creative people are characterized by being unconventional, individualistic, inventive, driven, visionary, intuitive, curious, fluent, uninhibited, risk taking, imaginative, humorous, sensitive, non-conformity, inquisitive, constructive-discontent, and those who have the ability to suspend judgment and criticism, perseverance and flexible in imagination (George, 2005). According to Guilford (1966, p.13) "Creativity is the key to education in its fullest sense and to the solution of mankind's most serious problems." This adequately advocates the need for nurturing creative potentials among school children. According to Parnes, (1963). "Creativity is thinking and responding process that involves connecting with our previous experience, responding to stimuli (objects, symbols, ideas, people, and situations) and generally to at least one unique combination." Educators and researchers believe that it's important to teach and foster creativity inside the classroom unit. Paradoxically, researchers have found that the school climate and curriculum guidelines discourage creativity (Andilou & Murphy, 2010; Baer & Kaufman, 2012; Benavides, Dumont, & Istance, 2008).

'Traditionally, the more the student's answer conforms to one or more predetermined responses, the higher the grade. Thus, in many assessment programs, a culture that rewards uncreative thinking is cultivated, rather than a culture that encourages and rewards creative answers' (Plucker, & Makel, 2010; & Runco, 2010).

In order to be creative one must first learn to generate new ideas, analyze these ideas, and share the ideas with others. A person may have the creative skills but may not apply them to situations that require solving a complex problem which involves creativity. 'In order to encourage the decision to be creative, one should believe that he or she will be awarded for the attempt to be more creative rather than punished' (O'Hara & Sternberg, 2001, pp.197-210). Therefore, in order to promote creativity there is a need in schools to construct opportunities for students to engage in it, encourage, and reward them to respond to novel ideas.

Researchers are curious in understanding the role of creativity in education. Creativity has been found to be significantly related to academic achievement by Russ *et al.*, (2003). 'Creativity contributes towards the mental health, education, vocational success and many other important areas in life. School environment is an important determinant of the creativity of students' (Sarah, 2013). Further, the role of teachers in developing creativity has also been studied and found that it plays a very important role in providing a conducive climate for creative growth in the classroom (Roy 2008).

## METHODOLOGY

In the present study, the researchers have raised the following research questions and also answered through the present study.

### *Research Question*

1. Do students of JNV's and KV's differ on Creativity?
2. Do boys and girls of JNV's differ significantly on Creativity?
3. Do boys and girls of KV's differ significantly on Creativity?
4. Do boys and Girls differ significantly on creativity?

In order to answer the above research questions the following objectives have been developed and achieved in the present study.

### *Objectives*

1. To study whether students of JNV's and KV's differ significantly on Creativity.
2. To study whether boys and girls of JNV's differ significantly on Creativity.
3. To study whether boys and girls of KV's differ significantly on Creativity.
4. To study whether boys and Girls differ significantly on creativity.

In order to achieve the above objectives, the following hypothesis have been generated and tested in the study.

### *Hypotheses*

- H1:** There is no significant difference between the students of JNV's and KV's on Creativity.  
**H2:** There is no significant difference between the boys and girls of JNVs on Creativity.  
**H3:** There is no significant difference between the boys and the girls of KVs on Creativity.  
**H4:** Boys and Girls do not differ significantly on Creativity.

### *Design of the Study*

The present study is a descriptive survey aiming at finding out whether students of JNVs and KVs differ on Creativity.

### *Sample*

The sample of the study covered 770 students, comprising boys and girls studying in 8<sup>th</sup> standard of Navodaya Vidyalayas and Kendriya Vidyalayas in Karnataka selected using stratified random sampling technique.

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### *Sampling Framework*

JNV and KV students of 8 <sup>th</sup> Standard					
	KV's Schools - 9			JNV's Schools - 8	
	North Karnataka	South Karnataka		North Karnataka	South Karnataka
Schools	4	5		5	3
Students	200	250		200	120
	450			320	
Total	770				

### *Tools and Techniques*

Variables	Tool	Author
Creativity	Verbal Test of Creativity	Baqer Mehdi(2009)
Personal Data Sheet	Developed by the Researchers	

Following tools were used in the study.

### *Data collection Procedure*

The selected students of the sample were administered the Verbal Test of Creativity and the personal data from the Jawahar Navodaya Vidyalayas and Kendriya Vidyalayas following the protocol, in Karnataka.

## **RESULTS & DISCUSSION**

The collected data were scored, tabulated and their descriptive statistics were calculated. Further, hypothesis wise the results were treated with inferential statistics. The obtained results are presented and discussed hypothesis-wise as follows.

***Hypothesis 1. There is no significant difference between the students of JNV's and KV' on Creativity.***

In order to test the above hypothesis the mean scores obtained by the students of JNV and KV on Creativity test was computed apart from the computation of SD and SE. Further, the significance of the difference between the means scores of the two schools was also computed using “*t*” test which yielded the following.

***Table 1. Significance of the difference between the students of JNV and KV on Creativity***

Independent sample test								
Schools	N	Mean	SD	SE	df	t-value	Sig.	Inference
KV	450	47.67	9.14	.43	768	4.20	.000	Significant
JNV	320	50.65	10.38	.58				

An analysis of the above table indicates that there were 450 students of KVs and 320 students of JNVs. The mean score of the students of KVs is 47.67, while that of JNVs is 50.65. Apparently, students of JNVs have an edge over the KV students. While, in terms of the standard deviation,



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KVs have 9.14, while that of JNVs have 10.38. It means, the spread of scores away from the mean is apparently more among JNV students suggesting that the variation is more among the JNV students as compared to the students of KVs. In order to see whether the obtained mean difference is true of the population also, the scores were subjected to “*t*” test, which was 4.20, which is statistically significant at 0.01 levels. This statistically significant difference is in favor of JNV Students. Therefore, the null hypothesis is rejected. It means the students of JNVs and KVs have differed significantly on creativity in favor of JNV students as their mean scores are higher than the students of KVs. It means the students of JNVs are significantly more creative than the students of KVs. This could be because, the students selected for the JNVs are selected at the district level and are provided education in a residential set up, while it is not so with KV students. As JNVs are opened with the objective of identifying the rural talents and to nurture them, perhaps the present study is validating the expectations of opening the JNVs. Sehgal, (1978) found that the students of residential model schools were more creative than those of government and private schools. Similar findings were recorded by Sultana, (1980), Haddon & Lytton (1968), Ezekeil (1966) Rastogi (1967) and Chatterjee, (1970). Therefore, the above finding that the students of JNVs are significantly more creative than the students of KVs has support from other studies too. It could be because the students and teachers are both available on the campus for the entire day and their opportunities of interaction and influence will be for a longer period than the students and teachers of the non residential schools. In a study, Renuka (2003) found that the Gurukul, a residential school students significantly differed from Govt. non residential school on Elaboration, but not on the other three dimensions of creativity i.e., fluency, flexibility, and elaboration. So partially, the above finding is corroborated by this study.

Agarwal, (1992) studied students of Kendriya Vidyalayas and found them to be significantly better than other management schools on creativity covering students of public, government (managed by state government) and aided residential schools (grant maintained) . The type of educational administration in a school is a significant factor in the development of creativity. The efforts of Kendriya Vidyalayas get due rewards in the form of the growth of creative potential of their students.

### ***Hypothesis 2. There is no significant difference between the boys and girls of JNVs on Creativity.***

In order to test the above hypothesis the mean scores obtained by the boys and girls of JNV's on Creativity test was computed apart from the computation of SD and SE. Further, the significance of the difference between means scores of the two groups were computed using “*t*” test which yielded the following.

**Table 2. Significance of the difference between the boys and girls of JNVs on Creativity**

Independent sample test								
		Mean	SD	SE	df	t-value	Sig.	Inference
Boys	176	50.51	10.51	.79	318	.26	.80	Not Significant
Girls	144	50.82	10.25	.85				

An analysis of the above table indicates that among the JNV school students, there were 176 boys and 144 girls taking the total to 320 students. In terms of their mean scores, the boys have scored 50.51 while the girls have scored 50.82 indicating a small difference, apparently in favor of girls. In terms of the SD the boys have 10.51 while the girls have 10.25 suggesting very little difference. In order to see whether the obtained mean difference is statistically significant, they were subjected to “*t*” test and found that two groups of boys and girls have not been found to differ significantly. So the null hypothesis is accepted. It means the boys and the girls of JNVs are alike on their creativity and they do not differ. This further validates that the selection of students to JNVs has not found any variation in terms of the creative powers of boys and girls. Torrance (1983) wrote, "A substantial body of evidence indicates that males and females perform at similar levels of tests designed to measure creative potential" (p.134). There are studies which highlight no statistically significant sex differences on the dimensions of verbal creativity by Phatak (1962), Tharnmaprateep (1976), and Rasool (1977). In fluency (Badrinath & Satyanaryana, (1979) or the flexibility dimensions (Sharma 2015; Vohra, 1975; Singh, 1993, pp.114-116). The present research finding goes with these studies.

***Hypothesis 3. There is no significant difference between the boys and the girls of KVs on Creativity.***

In order to test the above hypothesis the mean scores obtained by the boys and girls of KVs on Creativity test was computed apart from the computation of SD and SE. Further, the significance of the difference between means scores of the two groups were computed using “*t*” test which yielded the following.

**Table 3. Significance of the difference between the boys and girls of KVs on Creativity**

Independent sample test								
		Mean	SD	SE	df	t-value	Sig.	Inference
Boys	226	48.34	10.15	.67	448	1.559	.02	Significant
Girls	224	47.00	7.96	.53				

An analysis of the above table indicates that there are 226 boys and 224 girls in the KVs taking the total to 450 students, who are a part of the study. The mean scores of the boys on creativity test is 48.34 and that of girls is 47.00. There is a marginal apparent difference of mean scores in favor of boys. In terms of the standard deviation, the boys have 10.15, while the girls have 7.96, suggesting that the scores of boys are spread more away from the mean scores than that of the girls. In order to test the obtained mean difference for their statistical significance, the scores

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were subjected to t test and found to be 1.55, which is significant at 0.05 levels. So the null hypothesis is rejected. It means, the boys and girls of KVs differ significantly on creativity in favor of boys. The boys of the KVs are significantly more creative than their girl counterparts. This difference could be incidental as no specific explanation could be offered other than the one that the KVs have admitted students and provided education to students among whom boys are better than girls on their creativity.

Studies revealed by Torrance (1962, 1965) and Harold's (1968) results indicated that there is significant sex differences on several creativity variables, with males being stronger than the females. Raina, (1969) also found that boys excelled on all the figural measures of creative thinking as well as some of the verbal measures. Nayana, (1981) found that males excelled females on measures of verbal flexibility, figural originality and figural elaboration. Singh, (1982) found that boys to achieve significantly higher mean scores than the girls on the measure of creative thinking. Lau & Li (1996) found boys to be more creative than girls as (cited in Saima, 2011, p.6). On the reverse direction, there are studies which have found that girls are significantly higher on creativity than boys. It includes, Richmond (1971), Flaherty (1992), Kogan (1974), Tegano and Moran (1989), Coone (1969), and Warren & Luria (1972). Therefore, there are studies which have established the sex differences on creativity. However, it is not unidirectional when the gender and creativity are studied. But the present study has found that the boys have significantly bettered girls on creativity among the students of KVs.

### ***Hypothesis 4. Boys and Girls do not differ significantly on Creativity.***

In order to test the above hypothesis the mean scores obtained by the boys and girls on Creativity test was computed apart from the computation of SD and SE. Further, the significance of the difference between means scores of the two groups were computed using “t” test which yielded the following.

***Table 4. Significance of the difference between the boys and girls on Creativity***

Independent sample test								
		Mean	SD	SE	df	t-value	Sig.	Inference
Boys	402	49.29	10.35	.51	768	1.12	.06	Not Significant
Girls	368	48.50	9.11	.47				

An analysis of the above table indicates in total there are 402 boys and 368 girls taking the total to 770 in the study. In terms of the mean scores, the boys have 49.29 while the girls have 48.50, which leave a small difference apparently in favor the boys. On the issue of the standard deviation, the boys have 10.35, while the girls have 9.11 suggesting that the spread of scores away from the mean is more among the boys in comparison to the girls. The obtained “t” value is 1.12, which is not statistically significant. So the null hypothesis is accepted. It means, the boys and girls irrespective of whether they belong to JNVs or KVs do not differ on creativity and

they are the same. It goes to say that gender has no role to play when students of JNVs and KVs are taken together. The studies presented for hypothesis 2 holds good here too.

## **CONCLUSIONS**

1. The students of JNV's are more creative than the students of KV's.
2. The boys and girls of JNV's do not differ on Creativity.
3. The boys of KVs are more creative their girl counterparts. So by implication, JNV girls are better than KV girls on creativity.
4. The boys and girls of JNV's and KV's put together, are alike on their Creativity.

## **Implications**

Creativity is a great asset and a virtue among children which needs to be assessed and nurtured by schools and community. Teachers in schools are to be aware of these potentialities and work towards nurturing the same. Since the students of JNVs are found to be more creative and within them boys and girls do not differ, it indicates that the JNVs are in a position where the boys and girls are alike and they need to be nurtured further. While among the students of KVs, boys have an edge over girls on creativity, and on the whole they are less creative than JNV students. The KV teachers need to understand these variations and work towards enhancing differing levels of creativity among their students. In either case, the role of a teacher becomes seminal in understanding the creative potentials of their students and nurtures them. It is desirable that the takeaways of these studies reach the attention of teachers in the interest of their students.

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## Initiatory Experiences of *Amaibi*: A Phenomenological Study

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### ABSTRACT

*Amaibis* are priestesses and healers of the *Meitei*, one of the ethnic groups of Manipur, India. In the present paper, narratives of two *Amaibis* were subjected to an adaptation of Interpretative Phenomenological Analysis to explore and make sense of the experiences that constitute their life-world. Sickness and initiatory crises; dreams and altered states of consciousness; attempts to shield the initiate; heeding the call and search for “*Ema Guru*”; training and initiation of vocation; and adherence of rules and restrictions were found to be the six super ordinate themes which encapsulate the participants’ journey of shamanic initiation and ordeals towards the path of *Amaibihood*.

**Keywords:** *Amaibis*, *Initiatory*; *Shamanic*

An *Amaibi* is an individual who possesses the ability to communicate with *Lais* (deities) through their dreams, visions and trance. For this reason, they are first and foremost principal religious functionaries of indigenous *Meitei* religion and in addition, perform the role of a healer as well. Known as *Amaibi* or simply as *Maibi* among the *Meiteis*, however if we look at the primitive cultures around the globe, they fit right into the category of shamans as a shaman is the one who can voluntarily enter altered states of consciousness to experience themselves or their spirits, travel to other realms at will, and interact with other entities in order to serve their community (Walsh, 1990). According to Parratt and Parratt (1997) “*Maibis* are priestesses, invoking the *lais* (deities) and making offerings to them; mediums, receiving oracles from the *lais* (deities) and giving them out to the people; and, as expert singers and dancers, they are the preservers of the oral religious traditions” (p. 33).

Phenomenological Psychology regards that man’s awareness of “a being in the world” is intertwined and interdependent on his immediate environment—natural, social and man-made. Man and his world co-constitute one another and if considered as independent entities, they lose their meaningfulness. The purpose of any empirical phenomenological research is to articulate the underlying lived-structure of any meaningful experiences on the level of conceptual

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awareness (Valle, 1998), i.e. to get as close as possible to the participant's world, or to try to get, in Conrad's (1987) words, an insider's perspective.

### METHODOLOGY

#### *Objective:*

To explore the life-world of *Amaibi* for a fuller understanding of shamanic experiences.

#### *Sample:*

Two case studies of a 50 years old female *Amaibi* and a 55 years old male *Amaibi* belonging to Imphal, Manipur.

#### *Research Tool:*

Narrative data was collected using semi-structured interview method.

Data analysis was conducted using an adaptation of Interpretive Phenomenological Analysis, IPA (Smith and Osborn, 2003).

#### *Procedure:*

To collect the data, the *Amaibis* were approached one at a time at Imphal, Manipur. After briefing them about my research aim, they were requested to participate in the study and thereby consent was taken for sharing experiences and events significant to their "*Amaibihood*". They were informed that confidentiality will be maintained and that they will not be identified by name in final document of this study. Consent was also taken to audio-tape the entire interview. With the help of a semi structured interview schedule, the narrative data was collected. Since the audio taped data was in the form of *Meitei* language, the next step was to transcribe the same in English language. Care was taken in the translation to retain the experiences expressed in *Meitei* language. After finalizing the translation, the narrative data was subjected to an adaptation of Interpretive Phenomenological Analysis.

### ANALYSIS AND RESULTS

In the first step, broad themes— significant words, phrases, sentences— were extracted from the transcript.

Then it was followed by transformation of the initial notes into concise phrases to form "emergent themes" which captures the significant experiences found in the narrative. The emergent themes for Case 1 and Case 2 are listed down to look for connections between the themes:

#### CASE 1:

Sickness and poor health in childhood

Loss of appetite

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Fever along with shivering, teeth biting  
No doctor consulted  
Inadequate sleep due to frightening dreams  
Recurrent dreams involving birds and humans intending to restrain her  
Felt helpless on being chased  
Wish to be rescued  
Physical exhaustion due to the frightening dreams  
Fear of being captured  
Distressing dreams of being pursued by old man and woman to take her away  
No allopathic medication, only herbs used  
Sleep trouble, self-conversations  
Family against becoming an *Amaibi*  
Desire for a normal life  
Performed rituals to appease the deity  
Protection from the goddess's desire to take her as a medium  
Ill health resulted from obstructing the deity's wishes  
Effectiveness of appeasement ritual wears off  
Recurrence of frightening dreams involving birds and old man/woman  
Leaving games with friends with no conscious awareness  
Unconscious/unintended visits to *Laipham* (sacred sites of deities)  
Lured and summoned by the deities/spirits  
Reappearance of self-conversation during sickness  
Dreams and auditory hallucination involving goddess *Panthoibi*  
Heaviness in the head  
Full body ache  
Dizziness  
Severe stomach ache  
Hallucinations of travelling together with goddess *Panthoibi*  
Auditory hallucination of a woman telling her to find *Ema Guru*  
Search for *Ema Guru* in trance state  
Was found unconscious away from home  
Auditory hallucinations of goddess *Panthoibi* giving her certain tasks  
Trance, often along with unintelligible speech  
Body trembling and shaking preceded and accompanied the trance  
*Amaibi* was consulted as she became uncontrollable  
Fear of goddess's wrath if not attended to the demands  
Training under *Ema Guru* for rituals performances, chants, dance  
Participation in *Lai Haraoba* under *Ema Guru*'s supervision  
Adolescent years spent mostly with *Ema Guru*  
Stopped *Amaibi* related activities after marriage

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Ate food cooked with *Tairen* (*Toona Ciliata*) leaves to prevent relapse  
Went into trance few hours after first child birth  
Aggressive; violent and uncontrollable  
Tried to calm her down with medications  
Uneasy in the hospital environment  
Pressure/heaviness in her chest  
Difficulty breathing  
Extreme brightness in vision  
Hair tangled into a mass from being bed ridden for a long time  
Second and third child were given birth at home to prevent visit to hospital  
Turning point in life after birth of the third child  
Severely sick and bed ridden for a long time  
Unable to care for children  
Thin, emaciated and severely dry skin  
Trance often but not always followed by delivery of *Laibao* (prophecy)  
Perform prayers and offering  
Participates in *Lai Haraoba* independently  
Strictly follow rules on food, dress, and ritual performances  
Certain days of the week allowed to copulate with husband

### CASE 2:

Sickly and had to watch his diet during his childhood  
Followed a bland diet of boiled rice and vegetables  
Stomachache coupled with burning sensation was common  
Did not enjoy others company and playing with other children  
Quiet  
Thin and emaciated after a long bout of fever during toddlerhood  
Treated by an *Amaiba* with medicinal dried herb and performances of prayers  
Was told by *Amaiba* that he appeared unusual and different from the rest and will be well known by others  
In his dream he was advised to stop performing in dramas  
Slowly became disinterested in dramas  
Isolation  
Disinterest in his surroundings  
Lost in thoughts  
Overwhelmed and confused  
Withdrew himself from interacting with his parents  
Spent days in inactivity  
Delivered *laibao* (prophecy), under trance state, in a different accent  
Mostly incomprehensible words were spoken during trance state

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Family started suspecting his illness as the initial period of becoming an *Amaibi*  
Leave home under state of trance in search for *Epa guru*  
Loss of hunger and thirst  
Went missing for two days  
Body trembling and shaking preceded the trance states, followed by *laibao* (prophecy)  
Sickness continued for about four months  
Continued his search for *Epa guru* without having any whereabouts of him  
His dreams and auditory hallucinations provided descriptions of *Epa guru*  
Meeting with *Epa guru* in a disheveled condition  
*Epa guru* washed, dressed and fed him  
Cleaned and combed his long tangled hair  
Training on ritual performances, songs and dance  
Conducted offerings and ritual ceremonies after training period  
Body ache and heaviness, restlessness, worry and anxiousness disappeared during the training  
Violent shaking and trembling during trance states also stopped  
The deity *Khoriphaba* appeared in the form of a human – as a middle aged man holding a walking stick or a boy playing by himself  
Appeared as bright light and snakes before his training period  
Highly sensitive to auditory stimuli - sound of musical instruments at religious or non-religious ceremonies used to excite him or put him in trance or would him make emotional  
Follow strict rules and norms  
Conducts and performs *Lai Haraoba* and *Apokpa Khuramba*  
Performs offerings and prayers for treatment of illness, and prevention of misfortune  
Restriction on food habits  
Consumption of prohibited food item by accident either results in itchiness, swellings, and changes in mood – easily irritable or frightened  
Strength increased during trance states, 3-4 people were required to prevent him from getting hurt during the frenzied trance  
Bitten his lips and tongue, broke his toenails during trance  
Pain and exhaustion were felt after trance states  
Initially unskilled in subsiding or withholding extreme excitement or anger  
Uneasiness, detection of strong odour, body ache, heaviness, trembling preceded trance  
Chewing *Ciliata Toona* leaves calm him down and prevent going into trance  
Learnt chants/hymns for religious ceremonies and daily rules to be followed with regard to dress, food, sleep, manner of talking  
Treated skin irritation, swelling of hands/legs, general physical discomfort, and prevented frequent sickness or injuries or accidents from further occurrence  
Learnt how to use *Sarik*, the brass hand bell, under his *Epa guru*'s supervision

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*Based on the connection between the themes, theme clusters are formed:*

### **Case 1**

Sickness and poor health in childhood  
Loss of appetite  
Fever along with shivering, teeth biting  
No doctor consulted  
No allopathic medication, only herbs used  
Sleep trouble, self-conversations  
Ill health resulted from obstructing the deity's wishes  
Leaving games with friends with no conscious awareness  
Unconscious/unintended visits to *Laipham* (sacred sites of deities)  
Lured and summoned by the deities/spirits  
Reappearance of self-conversation during sickness  
Heaviness in the head  
Full body ache  
Dizziness  
Severe stomach ache  
Body trembling and shaking preceded and accompanied the trance  
*Amaibi* was consulted as she became uncontrollable  
Ate food cooked with *Tairen* (*Toona Ciliata*) leaves to prevent relapse  
Went into trance few hours after first child birth  
Aggressive; violent and uncontrollable  
Tried to calm her down with medications  
Uneasy in the hospital environment  
Pressure/heaviness in her chest  
Difficulty breathing  
Extreme brightness in vision  
Hair tangled into a mass from being bed ridden for a long time  
Severely sick and bed ridden for a long time after birth of the third child  
Unable to care for children  
Thin, emaciated and severely dry skin

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Inadequate sleep due to frightening dreams  
Recurrent dreams involving birds and humans intending to restrain her  
Felt helpless on being chased  
Wish to be rescued  
Physical exhaustion due to the frightening dreams  
Fear of being captured  
Distressing dreams of being pursued by old man and woman to take her away  
Recurrence of frightening dreams involving birds and old man/woman

## Initiatory Experiences of *Amaibi*: A Phenomenological Study

Dreams and auditory hallucination involving goddess *Panthoibi*  
Hallucinations of travelling together with goddess *Panthoibi*  
Auditory hallucination of a woman telling her to find *Ema Guru*  
Auditory hallucinations of goddess *Panthoibi* giving her certain tasks  
Trance, often along with unintelligible speech  
Trance often but not always followed by delivery of *Laibao* (prophecy)

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Family against becoming an *Amaibi*  
Desire for a normal life  
Performed rituals to appease the goddess  
Protection from the goddess's desire to take her as a medium  
Effectiveness of appeasement ritual wears off  
Fear of goddess's wrath if not attended to the demands

---

Search for *Ema Guru* in trance states  
Was found unconscious away from home  
Illness made her return to *Amaibihood* after birth of third child  
Turning point in life after birth of the third child

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Training under *Ema Guru* for rituals performances, chants, dance  
Participation in *Lai Haraoba* under *Ema Guru*'s supervision  
Adolescent years spent mostly with *Ema Guru*  
Perform prayers and offering  
Participates in *Lai Haraoba* independently

---

Strictly follow rules on food, dress, and ritual performances  
Certain days of the week allowed to copulate with husband

---

### **Case 2**

Sickly and had to watch his diet during his childhood  
Followed a bland diet of boiled rice and vegetables  
Stomachache coupled with burning sensation was common  
Did not enjoy others company and playing with other children  
Quiet  
Thin and emaciated after a long bout of fever during toddlerhood  
Treated by an *Amaiba* with medicinal dried herb and performances of prayers  
Slowly became disinterested in dramas  
Isolation  
Disinterest in his surroundings  
Lost in thoughts  
Overwhelmed and confused

## Initiatory Experiences of *Amaibi*: A Phenomenological Study

Withdrew himself from interacting with his parents

Spent days in inactivity

Loss of hunger and thirst

Body trembling and shaking preceded the trance states, followed by *Laibao* (prophecy)

Sickness continued for about four months

Highly sensitive to auditory stimuli - sound of musical instruments at religious or non-religious ceremonies used to excite him or put him in trance or would him make emotional

Strength increased during trance states, 3-4 people were required to prevent him from getting hurt during the frenzied trance

Bitten his lips and tongue, broke his toenails during trance

Pain and exhaustion were felt after trance states

Uneasiness, detection of strong odour, body ache, heaviness, trembling preceded trance

Chewing *Ciliata Toona* leaves calm him down and prevent going into trance

Family started suspecting his illness as the initial period of becoming an *Amaibi*

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In his dream he was advised to stop performing in dramas

Delivered *Laibao* (prophecy), under trance state, in a different accent

Mostly incomprehensible words were spoken during trance state

The deity *Khoriphaba* appeared in the form of a human – as a middle aged man holding a walking stick or a boy playing by himself

Appeared as bright light and snakes before his training period

His dreams and auditory hallucinations provided descriptions of *Epa guru*

---

Leave home under state of trance in search for *Epa guru*

Went missing for two days

Continued his search for *Epa guru* without having any whereabouts of him

Meeting with *Epa guru* in a disheveled condition

*Epa guru* washed, dressed and fed him

Cleaned and combed his long tangled hair

---

Training on ritual performances, songs and dance

Conducted offerings and ritual ceremonies after training period

Initially unskilled in subsiding or withholding extreme excitement or anger

Body ache and heaviness, restlessness, worry and anxiousness disappeared during the training

Violent shaking and trembling during trance states also stopped

Conducts and performs *Lai Haraoba* and *Apokpa Khuramba*

Performs offerings and prayers for treatment of illness, and prevention of misfortune

Learnt how to use *Sarik*, the brass hand bell, under his *Epa guru*'s supervision

Treated skin irritation, swelling of hands/legs, general physical discomfort, and prevented frequent sickness or injuries or accidents from further occurrence

Follow strict rules and norms

Learnt chants/hymns for religious ceremonies and daily rules to be followed with regard to dress, food, sleep, manner of talking

Restriction on food habits

Consumption of prohibited food item by accident either results in itchiness, swellings, and changes in mood – easily irritable or frightened

---

*Finally, super ordinate themes are assigned to each cluster as follows:*

## **SICKNESS AND INITIATORY CRISES**

### ***Case 1***

Sickness and poor health in childhood

Loss of appetite

Fever along with shivering, teeth biting

No allopathic medication, only herbs used

Sleep trouble, self-conversations

Ill health resulted from obstructing the deity's wishes

Leaving games with friends with no conscious awareness

Unconscious/unintended visits to *Laipham* (sacred sites of deities)

Lured and summoned by the deities/spirits

Reappearance of self-conversation during sickness

Heaviness in the head

Full body ache

Dizziness

Severe stomach ache

Body trembling and shaking preceded and accompanied the trance

*Amaibi* was consulted as she became uncontrollable

Ate food cooked with *Tairen* (*Cedrela Toona*) leaves to prevent relapse

Went into trance few hours after first child birth

Aggressive; violent and uncontrollable

Tried to calm her down with medications

Uneasy in the hospital environment

Pressure/heaviness in her chest

Difficulty breathing

Extreme brightness in vision

Hair tangled into a mass from being bed ridden for a long time

Severely sick and bed ridden for a long time after birth of the third child

Unable to care for children

Thin, emaciated with severely dry skin



**Case 2**

Followed a bland diet of boiled rice and vegetables  
Sickly and had to watch his diet during his childhood  
Stomachache coupled with burning sensation was common  
Did not enjoy others company and playing with other children  
Quiet  
Thin and emaciated after a long bout of fever during toddlerhood  
Treated by an *Amaiba* with medicinal dried herb and performances of prayers  
Slowly became disinterested in dramas  
Isolation  
Disinterest in his surroundings  
Lost in thoughts  
Overwhelmed and confused  
Withdrew himself from interacting with his parents  
Spent days in inactivity  
Loss of hunger and thirst  
Body trembling and shaking preceded the trance states, followed by *Laibao* (prophecy)  
Sickness continued for about four months  
Highly sensitive to auditory stimuli - sound of musical instruments at religious or non-religious ceremonies used to excite him or put him in trance or would him make emotional  
Strength increased during trance states, 3-4 people were required to prevent him from getting hurt during the frenzied trance  
Bitten his lips and tongue, broke his toenails during trance  
Pain and exhaustion were felt after trance states  
Uneasiness, detection of strong odour, body ache, heaviness, trembling preceded trance  
Chewing *Tairen* (*Cedrela Toona*) leaves calm him down and prevent going into trance  
Family started suspecting his illness as the initial period of becoming an *Amaibi*

**DREAMS AND ALTERED STATES OF CONSCIOUSNESS**

**Case 1**

Inadequate sleep due to frightening dreams  
Recurrent dreams involving birds and humans intending to restrain her  
Felt helpless on being chased  
Wish to be rescued  
Physical exhaustion due to the frightening dreams  
Fear of being captured  
Distressing dreams of being pursued by old man and woman to take her away  
Recurrence of frightening dreams involving birds and old man/woman  
Dreams and auditory hallucination involving goddess *Panthoibi*  
Hallucinations of travelling together with goddess *Panthoibi*

## Initiatory Experiences of *Amaibi*: A Phenomenological Study

Auditory hallucination of a woman telling her to find *Ema Guru*

Auditory hallucinations of goddess *Panthoibi* giving her certain tasks

Trance, often along with unintelligible speech

Trance often but not always followed by delivery of *Laibao* (prophecy)

### Case 2

In his dream he was advised to stop performing in dramas

Delivered *Laibao* (prophecy), under trance state, in a different accent

Mostly incomprehensible words were spoken during trance state

The deity *Khoriphaba* appeared in the form of a human – as a middle aged man holding a walking stick or a boy playing by himself

Appeared as bright light and snakes before his training period

His dreams and auditory hallucinations provided descriptions of *Epa guru*

## SHIELDING THE INITIATE

### Case 1

Family against becoming an *Amaibi*

Desire for a normal life

Performed rituals to appease the goddess

Protection from the goddess's desire to take her as a medium

Effectiveness of appeasement ritual wears off

Fear of goddess's wrath if not attended to the demands

## HEEDING THE CALL AND SEARCH FOR EMA GURU

### Case 1

Search for *Ema Guru* in trance states

Was found unconscious away from home

Illness made her return to *Amaibihood* after birth of third child

Turning point in life after birth of the third child

### Case 2

Leave home under state of trance in search for *Epa guru*

Went missing for two days

Continued his search for *Epa guru* without having any whereabouts of him

Meeting with *Epa guru* in a disheveled condition

*Epa guru* washed, dressed and fed him

Cleaned and combed his long tangled hair

## TRAINING AND INITIATION OF VOCATION

### Case 1

Training under *Ema Guru* for rituals performances, chants, dance

Participation in *Lai Haraoba* under *Ema Guru*'s supervision

Adolescent years spent mostly with *Ema Guru*

Perform prayers and offering

Participates in *Lai Haraoba* independently

### Case 2

Training on ritual performances, songs and dance

Conducted offerings and ritual ceremonies after training period

Initially unskilled in subsiding or withholding extreme excitement or anger

Body ache and heaviness, restlessness, worry and anxiousness disappeared during the training

Violent shaking and trembling during trance states also stopped

Conducts and performs *Lai Haraoba* and *Apokpa Khuramba*

Performs offerings and prayers for treatment of illness, and prevention of misfortune

Learnt how to use *Sarik*, the brass hand bell, under his *Epa guru*'s supervision

Treated skin irritation, swelling of hands/legs, general physical discomfort, and prevented frequent sickness or injuries or accidents from further occurrence

## ADHERENCE OF RULES AND RESTRICTIONS

### Case 1

Strictly follow rules on food, dress, and ritual performances

Certain days of the week allowed to copulate with husband

### Case 2

Follow strict rules and norms

Learnt chants/hymns for religious ceremonies and daily rules to be followed with regard to dress, food, sleep, manner of talking

Restriction on food habits

Consumption of prohibited food item by accident either results in itchiness, swellings, and changes in mood – easily irritable or frightened

## DISCUSSION

The first super ordinate theme of “Sickness and Initiatory Crises” indicates the remote preparation for vocation which begins with sickness as the journey to become cured and to cure. Case 1 clearly had a childhood which was interrupted by frequent illness. Both in childhood and after marriage, she experienced dissociation as evidenced by the occurrence of self-conversations, discontinuity in awareness and trance states. Similarly, Case 2 went through bouts of illness during the period from infancy to toddlerhood. During middle childhood, he was

withdrawn, and quiet. During trance states, he exhibited considerable strength resulting in a state of frenzy and physical injury if not contained by others. Ray (2004) found that when an *Amaibi* is possessed by the *lai* (deity), she acquires incredible strength and cannot be controlled even by a number of persons. She also pointed out that during their illness the *Amaibis* develop some kind of lump in their abdomen which surgeons are unable to locate. Furthermore, both the cases used *Tairen* (*Cedrela toona*) leaves and *Langthrei* (*Eupatorium birmanicum*) to prevent recurrence of their symptoms. *Tairen* leaves is known for its medicinal properties especially in skin diseases and poxes and the young shoots and leaves of *Langthrei* are used for epilepsy (Laishangthem & Sharma, 2014). From the two cases, it can be discerned that when the illness is at its peak, manifesting acute symptoms, it may appear to be a case of neurotic, stress related and somatoform disorders according to ICD-10 or culture bound syndrome according to the DSM disorders. However, the resolution of the lingering illness without pharmacological and psychotherapeutic interventions is worth to be studied and understood because not only both the cases became symptom free and at peace from their prolonged suffering but also became well integrated with society.

The – second super ordinate theme of “Dreams and Altered States of Consciousness” also indicates the preparation for vocation and mental ordeal that an initiate goes through. In the modern times, dreams are given less significance and are generally forgotten as irrelevant or irrational psychic product. However, if we look at primitive cultures or even the Greek civilization, dream interpretation was employed for purpose of healing by acknowledging and accommodating the unconscious expressions. For Case 1, the dreams were nothing short of nightmares. The chase by a big, black crow like bird and persuasion by old woman and man were fear provoking and being chased by these figures indicates the resistance of consciousness to submit to or be overwhelmed by the unconscious. The dreams, however, are essentially beneficial for the initiate as they unconsciously expose her to hardships akin to the difficulties one must go through to become an *Amaibi* and in this manner the dreams mentally prepare the initiate for the experiences she will soon encounter. Further, as the days progressed, the dreams and hallucinations involving goddess *Panthoibi* became more realistic and assertive, the participant grew responsive towards the call. She began to heed her auditory hallucinations which instructed her to find her trainer *Amaibi*, locally addressed as *Ema Guru*. She also went into trance states and delivered prophecies, *Laibao*, in a different accent. The trance experience of Case 1 can be described as mediumistic trance wherein the shaman or medium invites another spirit or entity to take full control of their body in order to communicate or perform some other valuable function such as healing (Daniels, 2002). Mediumistic trance occurs in a forceful, sometimes violent manner among the *Amaibi* initiates. It however becomes less frenzied and controlled once an initiate is trained. This form of is commonly experienced by the *Amaibis*. With respect to Case 2, his initial dreams gave clues about the impending changes. When, in his dreams, he was advised to stop performing in dramas, it left him perturbed because at that point of time, he was still very passionate about being an artiste. However, in a short period of time, he

grew disinterested in dramas without any apparent reason. It was a time of confusion, he withdrew himself from public life and spent time alone, mostly in deep thoughts but nothing made sense to him. Soon, he started going into trance states, speaking either incomprehensible words or in a different accent. As the initiation progressed, he had dreams and visions of his deity/spirit-guide in different forms – as middle-aged man, young boy, serpent, and as bright light. He also had auditory hallucinations providing him descriptions of his trainer *Amaibi*. It is said that for a shaman, inspiration comes mainly through dreams. According to Jung (as cited in Ryan, 2002) all the lions, bulls, dogs and snakes that populate our dreams represent an undifferentiated and as yet untamed libido, known as the *anthropoid psyche*, which is a part of the human personality. Jung added that this same psyche contains images of divine beings, therianthropic (both human and animal) creatures representing man in his potential “wholeness” – the totality of being, which is rooted in animal nature, yet capable of reaching out beyond the merely human towards the divine. He continued, the guise in which figures appear depends on the attitude of the conscious mind; if it is negative towards the unconscious, the theriomorphic (animal) figures will be frightening; if positive, they appear as the helpful animal of fairytale and legend. With increased insight, the symbols of transformation which initially appears threatening and frightening ultimately become sources of inner wisdom and unconscious forces which previously enorge the shaman now becomes his guides (Ryan, 2002).

The third super ordinate theme of “Shielding the Initiate” denotes the refusal and opposition of senior members of initiate’s family to allow the initiate to submit to the spiritual calling. This was seen only in the case of Case 1 because she was very young, only 10 years old when the sickness first started. A ritual, *Yeisinba*, was performed in order to appease the deity and leave the initiate for a few more months or years. However, after 2 years the sickness returned back. The ritual could no longer protect her. Her elders began to fear for her deteriorating health and survival. It is believed among the *Meiteis* that once *Yeisinba* starts to fail, further attempts to prevent the deity can result in death of the initiate or any of his/her family members. During the *Yeisinba* period lasting about 2 years, the initiate’s grandfather, a key participant in the ritual conduction, fell ill and died. He was healthy, and physically agile so his death was a surprise to all family members and they associated it with deity’s wrath for performing *Yeisinba*. The family members did not want to risk losing another life. They therefore decided not to obstruct the deity any further and allow the initiate to join *Amaibihood*. Similarly, Eliade (1970) found among the Siberian, Central Asian and Native American shamans that a person is usually reluctant to become a shaman and assumes his power and follows the spirits’ bidding only when he is told by other shamans that otherwise death will result. Among the *Meities* it is observed that when all attempts to shield the initiate fails i.e., when no allopathic or homeopathic or religious rituals fails to cure the sickness, the initiate is advised to embrace the path of *Amaibihood*. It is considered as the last resort to alleviate the sickness.

The fourth super ordinate theme of “Heeding the Call and Search for Ema Guru” reveals the suggestiveness and responsiveness of the initiates to their visions and hallucinations of locating the “*Ema/Epa guru*”—the trainee *Amaibi* who will care and guide the initiates into becoming a full-fledged *Amaibi*. With regard to Case 1, due to deterioration in her physical and mental state, an *Amaibi* was consulted to facilitate the search for the “*Ema Guru*” although the initiate herself also went searching for the “*Ema Guru*” in her trance states but her searches were unsuccessful and was often found in unconscious states. Further, Case 2 also left home many a times during his trance states to search for his chosen “*Epa guru*”. He was persistent in his search, went missing from home for days and though successful in locating his “*Epa guru*” the search left him disheveled and close to emaciation. Though during the time of sickness, ample sympathy and empathy are provided by others, they cannot really help. The “*Ema/Epa guru*” is needed for extraordinary help. One looks for spiritual help because there is no social and medical consolation available. This theme reflects the initiates’ yearning to eliminate the psychic chaos and confusion, which Jung (1975) termed as *soul loss*, by finding and uniting with their “*Ema/Epa guru*”. Jung understood that severing of ties, and losing contact with the deep structures of our psyche results in the soul’s sickness, neurosis and it is that which psychotherapy attempts to treat by aiming at psychic integration.

The fifth super ordinate theme of “Training and Initiation of Vocation” represents the experience of being born again i.e. the end of the sickly self and the beginning of a new life characterized by vigor as opposed to pathological symptoms, control over one’s mind and body and service of community by attending to others sickness and performing religious rituals. Both the cases were looked after by their *Ema/Epa guru*. Prayers were conducted for their health and medicinal plants, commonly *Langthrei* and *Tairen* (*Cedrela Toona*) were used. After physical and mental health stabilized, they were trained on conduct of ritual performances, chants, dance, about various spirits/deities, how to attained voluntary, controlled trance and use of *Sarik* (brass handbell) as a means to facilitate attainment of trance and connect with the spirit-guide (deities). Similarly, in other shamanic cultures, song, dance, drum and rattle are used for inducing trance. All the symptoms of illness, both physical and mental are believed to be curable with the help of skills imparted during training and through *lairen puba* i.e. purification process conducted at completion of training (Brara, 1998). Both the cases were also trained on conduct rituals of *Apokpa Khuramba* (annual prayer and offering given to ancestral/ clan deity), and *Lai Haraoba*, annual religious festival of *Meiteis* which is centered around re-creation and renewal of earth and mankind.

The sixth super ordinate theme of “Adherence of Rules and Restrictions” indicates that the an *Amaibi* has to follow certain rules in his/her daily life to maintain ties with the spiritual realm. These rules include dietary restrictions (e.g. to avoid catfish and eels), days to perform religious rituals and offerings, days allowed to copulate with spouse, daily and ceremonial dress, and avoiding lies and deceptions. Both the cases follow the rules stringently to avoid ill health,

misfortune to self and family. The allegiance to these rules also explains the importance and value they assigned to their relationship with the divine.

### CONCLUSION

The use of Interpretive Phenomenological Analysis (IPA) has made it possible to consolidate the experiences and make sense of the seemingly unusual life-world of the participant *Amaibis*. As it is a case study of only two *Amaibis*, the onset, intensity, variety and period of the crises experiences cannot be generalized to the entire *Amaibi* population in Manipur. However, the structure of experience represented by the six superordinate themes can facilitate the readers to understand and appreciate shamanic initiation and *Amaibihood*. It would be worth to study the rituals conducted before and during the becoming of a full-fledged *Amaibi* as it has the potential to reveal primitive-cultural beliefs of the *Meiteis* in the area of sickness, healing and renewal. Another fertile area of study would be the training period of initiates as it can bring to light the gradual transition from sickness to health and the methods imparted to attain mediumistic trance and deliver oracles.

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### Conflict of Interests

The author declared no conflict of interests.

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## **Development of Psychology in Sri Lanka in comparison to Germany: Origin, Development, and Limitations**

Asanka Bulathwatta<sup>1\*</sup>

### **ABSTRACT**

Development process of any other field is not a quick one. It may come across steps throughout the history. When we compare the European region with the Asian region the situational processes they came across have similarities and differences. Germany is the birthplace of many psychological schools in which Sri Lanka still have some shadow of those schools and keep continuing some parts of psychology adapted from this society. Nevertheless, there are some trends of having own psychological practices affirming the cross-cultural framework. Sri Lankan universities are now trying to give a proper place for Psychology but still the tendency is not adequate compared to the placement given into other disciplines.

**Keywords:** *Psychology, Germany, Sri Lanka, Philosophical Idealism, Development Process*

Sri Lanka is an island which located in Indian Ocean and south of India. It officially indicated as a Democratic Socialistic republic of Sri Lanka. Sri Lanka was under colonized by Portuguese, Dutch and in the end by English. It was independent by English in 1948 and kept remaining a name called Ceylon till the year 1972. Germany compared to the Sri Lanka is a developed country and some of the Psychological school merely originated based upon the Germany. The purpose of this article is to figure out the inter country differences in between Sri Lanka and Germany in terms of Psychology origin, development, limitations and current trends.

### ***Historical Turning points in Sri Lanka***

Sri Lanka got freedom from the British in 1948. And exposed to the open Economy system in 1977. The Society of Sri Lanka has Dramatically changed due to socio- economic changes. According to the World Bank discussion with Prof Indralal de Silva (2016) Sri Lanka is experiencing demographic transition and it will peak by 2041. Development of health care

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system and reduction of child mortality rates and all these conditions to be lead Sri Lanka into the oldest population in south Asia by the year 2041.

The situation of Traumatic experiences in Germany and Sri Lanka is differed in terms of Geographical location, economical situational and the cultural factors. For example, Sri Lanka was exposed to Tsunami in 2004 which was the second affected population of the world in terms of impact level of it. Moreover, Sri Lanka frequently exposes to landslides, Lightning strikes, coastal erosion, epidemics and environmental pollution, flooding and storms (Ministry of Disaster Management, 2016). Therefore, the trauma afterwards the disasters are to appear as the natural trauma in Sri Lanka in comparing with Germany. Moreover, there are certain tends of Personal disasters and trauma followed by these events emerges in Sri Lanka. According to Jong et al. in 2002 Sri Lanka has many personal traumas based upon war in between Liberation Tigers of Tamil Eelam(LTTE) and Sri Lankan government for 30 years. Still, some people are displaced based on this Civil war and War veterans and civilians have ended up with many Psycho-Social issues and traumas. In addition to the fact of Natural and civil war there are some interpersonal Traumas among Sri Lankan young populations. A Study done by Haj-Yahia, Tishby, & Zoysa, with 476 Sri Lankan students in 2009 point out that students more exposed to interpersonal violence and parental violence, the more they exhibit PTSD symptoms.

Recent research conducted in high-income countries suggests psychotic experiences are common in the general population, but evidence from low- and middle-income countries (LMIC) remains limited. Sri Lanka is a LMIC affected by three decades of civil conflict and, in 2004, a devastating tsunami. This study aimed to investigate the prevalence of psychotic experiences in a general population sample in Sri Lanka and associations with conflict- and tsunami-related trauma. This is a first National Mental Health Survey conducted in Sri Lanka. A cross-sectional, multi-stage, cluster sampling design was used to estimate the prevalence of psychotic symptoms. Data on socio-demographic characteristics, conflict- and tsunami-related trauma, and psychotic experiences were collected using culturally validated measures in a sample of 5927 participants (Keraite, Sumathipala, Siriwardhana, Morgan, & Reininghaus, 2016, p. 79).

### **Historical Turning points in Germany**

History of Psychology in Germany has a relatively long history compared to Sri Lanka. In 1878 Wilhelm Wundt started the first experimental Psychological Laboratory at the University of Leipzig. Germany is the Birthplace of certain schools of Psychology such as Gestalt psychology. Philosophical development happened right through Rene Descartes cannot be ignored.

‘In Germany, the situation is somewhat differ than the Sri Lanka Germany has a history that stretches back to antiquity, it is important to remember that it was first unified as a nation state only in 1871, making it in a sense even younger than the United States. Located in the heart of

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Europe, without natural boundaries, Germany has experienced centuries of immigration, confrontation, and negotiation.’ (Coy, 2011, p. XIII)

‘The stages are indicated by headings treating the development of psychology during the period of Restoration after 1814/15, in the German Empire (1871–1918), in the Weimar Republic (1919–1933), during the time of National Socialism (1933–45), in the Federal Republic of Germany (FRG, 1949–1990), in the German Democratic Republic (GDR, 1949–1990), and in united Germany after 1990.’ (Sprung, 2001, p. 364)

### ***Philosophical idealism and German Psychology***

Psychology in Germany was born based with the Philosophical ideology introduced by the Kant Hegal, Fechner, Schellling, Carl Gustav Carus, Physiological Psychology, Jchann Christian August Heirath, F.C:TH fischer and Heinrich Steffens, Carl Ludwig Michelet, Hegal Moritz Lazarus, Hayim Steinhil, Post Kantian idealistic Psychology. , Influence of idealistic psychology.

There was major historical phenomenon in Germany in which influenced on such Falling of Berlin Wall join back the German capitalism and German Socialism, Narcissism during the World War II. Recently the acceptance of huge number of Refugees to the German society. The Nazi platform appealed not only to violent thugs and Freikorps veterans but also to anxious middle-class Germans traumatized by the Great Depression, who were attracted to Hitler’s ardent nationalism and charismatic personality in a time of unsettling crisis and instability. Students and intellectuals were enchanted by the Nazis’ aura of confident modernity, embracing the party’s fascination with mass media, technological efficiency, and racial pseudoscience. For Germans disenchanted with the Weimar Republic, the carefully staged mass rallies put on by the Nazis presented an idealized image of German unity and national pride that provided a striking contrast with the divisive parliamentary politics of the Weimar era. (Coy, 2011, pp. 181–182)

There is a tendency of come up with traumas such as Health issues and interpersonal complex issues are very common in German context. Attempting suicide and suicide ideation trauma are common among German student sample. (Plener, Singer, & Goldbeck, 2011). Moreover, there is a tendency of accept refugees in Germany. Therefore, we can’t forget the trauma underneath the refugees who come to Germany. Their traumas not only impact on their community but also to German communities as they are going to socialize in the German society. Study done with refugee young population points out that feeling of guilt, and shame as well as trauma symptoms were all associated with the traumatic events they faced (Stotz, Elbert, Müller, & Schauer, 2015). Moreover, accident related trauma is more frequent in Germany. According to a study done by Mahmoodi et al., in 2015 with Dental trauma population points out that Eight percent of all patients seeking help at the dental emergency service presented with trauma, meaning that dental traumatology are one of the major topics in emergencies. To improve the quality of care,

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Further public education, expert knowledge among dental professionals and a well-structured emergency service are necessary. However, the death rate of injuries represents relatively low value in Germany. (Standardized injury rate <30 and Death rate followed injury 5%)

### *Development of Psychology in Sri Lanka*

Psychology was established in Sri Lanka in early 1980. And it was basically established in the University context in Sri Lanka based with the subject philosophy. Situation is dramatically changing as University of Peradeniya, Sri Lanka is increasing the capacity and quality of Psychology special programme for the undergraduate students and for some programmes to the post graduate students. For example Bullock (2016) points out that capacity is very low for the people who are willing to do Psychology in Sri Lanka. In addition, to the fact that there is a tendency to developing some private institutes and some institutes attached to Universities which offer diploma and certificate courses people who are willing to explore the psychology related disciplines. In Sri Lanka, Psychology is attached to the concept and practical methodology so called Counselling. In addition, Education Psychology is also a significant popular and University of Colombo has established a department of Education Psychology attached to faculty of Education.

In Sri Lanka, there is opportunity to gain a four year degree in Psychology (Bachelor of Arts) inside the national university system, either as a standalone degree in Psychology (University of Peradeniya, University of Jaffna, University of Kelaniya).

**Table 1 Sri Lankan universities and Psychology degree programmes**

University	Name of the course	Degree offers
University of Peradeniya	Department of Philosophy and Psychology.	Honors Degree in Psychology Postgraduate Diploma in Psychology Certificate course in Counselling and basic counselling skills Progress into Masters and PhD programs
University of Kelaniya	Department of Philosophy	General Degree course in Psychology; Special degree course in Psychology, Diploma in Counselling
The Open University, Sri Lanka	Department of Psychology and counselling	On the process of developing a Bachelor of Science Honors Degree in Psychology course.
University of Jaffna	Department of Philosophy	Degree offers separately as Psychology honors
University of Sri Jayewardenepura	Department of Philosophy	Degree offers combinedly with Philosophy

*Note: Private academic institutes in Sri Lanka are not being considered.*

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Although psychology in Sri Lanka is a popular topic both in the university and in the media, it is yet not recognized as an independent discipline in the national university system. Thus, there are no psychology departments in the national university system and postgraduate education in psychology is limited to a Masters' of Philosophy program in clinical psychology. This program, which enrolled its first cohort of six students less than six months ago, is taught by foreign staff, who fly in for brief lecture stints. Psychology is offered as a subject or program at a number of universities. For example, it is taught as a program within the Department of Philosophy at some universities, and as a subject within departments of Philosophy, Sociology or Education at other universities. Pragmatically, this means that, by and large, students cannot receive a specialized degree in psychology (undergraduate or graduate) unless they study outside the country, and psychology faculty members do not have a substantive academic home. This, added to a general lack of academic resources (books, textbooks, internet resources, laboratories, IT facilities) means that there is much room for psychology to develop' (Bullock, 2016)

### **PSYCHO-SOCIAL ISSUES IN SRI LANKA**

#### ***War***

As mentioned from the first part of this article Sri Lanka has many burning issues such as Development of older population (The World Bank, 2016). In addition to the fact that Sri Lanka had a civil war in between Liberation Tigers of Tamil Eelam (LTTE) and Sri Lankan government for thirty decades. It caused to results deaths more than 64,000, struggles, conflicts in human life and shattered the economy (Jong et al., 2002).

There are many displacements and increase of number of refugees, exposed experiences in war caused the countrymen traumatized from this war matter. A substantial number of participants had been directly exposed to war.' Many had witnessed attacks on their village, aerial bombing, mortar fire, cross fire, and instances of torture, and had seen wounded people, and people being burnt in their houses. 20 (12%) had been attacked, 28 (18%) arrested or kidnapped, 27 (17%) taken hostage or detained, 28 (17%) maltreated by police or army personnel, and 17 (11%) tortured. Instances of rape were low (five of 162) but there were concerns about underreporting since 60% of respondents (97) claimed to have heard of rape cases. Almost all had lost their homes or property (157, 97%) and faced starvation (152, 94%). 88% (142) described a constant feeling of being unsafe' (Jong et al., 2002, p. 1517).

#### ***Suicide***

Sri Lanka is a one among the countries which reports world highest suicide rate (Jong et al., 2002). 4000 people killing themselves per year, or about 11 persons a day. According to Suicide prevention day Programme organized by Dr. Neil Fernando the head of National Institute of Mental Health Promotion, the people who tend to Suicide are in the age range of 15-44 old in Sri Lanka. As Dr. Fernando points out, risk factors of Suicides in Sri Lanka include mental and

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physical illness, alcohol and other substance abuse, chronic illness, acute emotional distress, violence and sudden and major changes in peoples' lives, such as job losses or separation of a partner (Amaranath, 2012).

### ***Child abuse***

One of the current trend of Social issues which lead many psycho social changes in Sri Lanka is the child abuse. Child abuse and child labor is also a very common in Sri Lanka. There is some media attracted child abuse case in every year. But Child abuse is a phenomenon which happened in daily basis in Sri Lanka.

### ***Natural disasters***

Sri Lanka is a path to two Monsoons seasons rain and lead more natural disasters due to those Monsoons and other weather related hazards (landslides, lightning strikes, coastal erosion, epidemics and effects of environmental pollution.) (Ministry of Disaster Management, 2016).

Traumatic experience shown by the people are very common in Sri Lanka. For instance, Sri Lanka exposed to Tsunami resulting more than 48,000 deaths and many other psycho, social, economic catastrophes in Sri Lanka. Sri Lanka was the world second affected country from that Tsunami.

## **CONCLUSION**

Development process of a subject in a country depend on many factors. Psychology has a long history in Germany compared to Sri Lanka. Germany has some historical schools which is to really a matter to modern psychology. Philosophical involvement and political and social factors have influenced to German culture to develop the current situation of Psychology there. But Sri Lanka has short history of its development of Psychology. But there are different field which varying from Germany in Sri Lanka for the application of Psychology. Compared to the bridging the gap possibilities the lack of governmental universities course for students to learn is a gigantic issue in Sri Lanka nowadays. Most of the time student can obtain a government university degree when they enrolled into the Universities. Apart from that the Open university of Sri Lanka trying to launch a new Bachelor of Science honors degree in Psychology. Affirming the cultural diversity and development of cultural specific Psychology is immensely needed factor for the current situation in Sri Lanka.

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## Predicting Cancer from Depression: A Systematic Review of Prospective Studies

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### ABSTRACT

Past research has proposed depression as a risk factor for developing cancer. Because results of previous prospective epidemiological investigations are found to be conflicting and inconclusive, the current review evaluates the substantiation of cancer resulting from depression by reviewing prospective cohort studies. Identified studies, through a sensitive search strategy with the help of keywords, from Medline and Embase were retrieved as per the developed protocol and the PRISMA 2009 recommendations. The screening for the relevance of studies and the entire process of selection was done with criteria. A validated checklist ensured methodological quality whereas accuracy was made certain by double-data extraction technique. Results suggest a possible causal link between depression and the risk of cancer. When chronic and severe depression predicted greater risk of cancer, findings are inconclusive on the link between less severe depression and cancer. With the high prevalence of mood disorders, this review draws the attention towards a common biological pathway linking depression and cancer. This also highlights the necessity to discover means to control it, and hints the toxic effect of depression on risk factors in elevating the risk of cancer. Research and clinical implications are also dealt.

**Keywords:** *Adverse childhood experiences, Stress, Progressive muscle relaxation, Adolescence, Stressors, Mental health*

Our body and mind are interacting each other and it is thought to be true in case of development of cancer. Since the time of ancient Greeks it has been postulated that depression and cancer are linked (Snow, 1893). It is learnt that mental disorders such as depression and anxiety increases the risk of cancer. Many have attempted to explore the link between depression and cancer and these have produced both mixed and controversial findings (Hahn & Petitti, 1988; Kaplan & Reynolds, 1988; Zonderman, Costa, & McCrae, 1989; Friedman, 1994; Chen & Lin, 2011). A few meta-analyses suggested a small and marginally significant association between depression

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and subsequent cancer risk (Oerlemans, van den Akker, Schuurman, Kellen, & Buntinx, 2007; McGee, Williams, & Elwood, 1994). As this is inconclusive, the present study focuses on the findings of prospective studies that were published later. The objective of the current study was to appraise the substantiation for predicting cancer from depression among adults through the review of prospective cohort studies.

### **METHODOLOGY**

The review was based on a plan that was developed in advance after consulting experts, the general recommendations from the PRISMA 2009 revision (Moher, Liberati, Tetzlaff, & Altman, 2009) in relation to processing and reporting of results, and pre-defined, documented inclusion criteria.

#### ***Inclusion and Exclusion criteria***

The first level in the selection process was a relevance screen that the study: a) is related directly to “depression” and “cancer risk”; b) was a primary study (not a review of studies); c) is the research involved only human subjects; and d) has a follow-up period of 7 years or more. The next step assessed prospective cohort studies for meeting the following inclusion criteria: the study (1) is general population based, original empirical research published in a peer-reviewed journal of English language, (2) focused on prediction of cancer from depression, (3) reported measurement of depression using standardized scales, and (4) reported RR and CI. Studies focusing on pediatric or adolescent population, studies considering depression as an outcome of cancer, ascertainment of depression from self reports alone, and studies without empirical data were excluded. The main exclusion criterion was the period of less than 7 years between the collection of exposure data and assessment of the last reported outcome data.

#### ***Literature search***

Studies included in the current review were identified from electronic databases, by checking reference lists of articles for additional relevant publications, and by consulting experts in the relevant field. Medline and Embase from 1996 December to August 2010 were searched using a sensitive search strategy with keywords such as “depress\*” in addition to “cancer risk”. The search was limited to articles published in English language as full text reports only. The last search was run on 19 September 2012. Searches were independently performed by two researchers.

#### ***Selection of studies***

Among a total of 191 investigations that were recognized for addition in the current review, 179 were from Medline and Embase databases and 12 studies were from other sources. Of the remaining studies (184) that were found after removing duplicated ones, 133 were further avoided because these could not meet the current study criteria. Three more were found to be not useful since full text of the article was not accessible. On detailed examination of the full text of

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the remaining 48 citations, 45 studies were excluded for not meeting the inclusion criteria. Remaining 3 studies were considered for the review. There were no unpublished relevant studies that could be obtained. All investigations under final review were prospective cohorts published in English language. Out of 48 studies, 3 articles indicated substantiation of a connection between depression and the risk of cancer.

### *Data extraction and Assessment of Quality*

The full-text article or abstract of any investigation that seemed to fulfill the inclusion criteria was retrieved for detailed review. Two investigators, who were masked to the journals, reviewed and individually appraised articles for suitability. Differences in opinion between reviewers were solved through discussion. A data extraction sheet developed and refined after consulting experts was used to retrieve necessary information. Information was extracted from each included study consisted of details such as its publication, country where the study was conducted, age of participants, methodological aspects including the sample size, the design, key variables (exposures, outcomes, and confounding factors, including how these were measured), length of the follow-up, statistical techniques used, and results. Data were extracted by two reviewers separately and made it in to two separate Excel documents. This double data extraction method ensured more accuracy. Files were, then, compared and when data did not match, the original article was re-checked. Criteria used for quality assessment are given in table.1.

**Table. 1. Predicting cancer from depression: Criteria for Quality Assessment**

SN	Criteria
1.	Representativeness of the population Population-based representative = 1 Not representative, or no description = 0
2.	Assessment of depression Secure hospital record/ using standardized scale =1 Self-reported or structured interview or self-administered non – standardized scale or no description = 0
3.	Ascertainment of exposure of interest Data on depression collected prospectively = 1 Data on depression collected retrospectively = 0
4.	Assessment of outcome (cancer) Use of hospitalization records/ /National death index/ National cancer registry =1 Self-reported or structured interview or self-administered questionnaire or no description = 0
5.	Appropriate methods to control confounding Yes = 1 (multiple variables adjusted) No = 0 (univariate analysis or controls for age/sex only)
6.	Adequacy of follow-up of cohorts or response rate Completeness good (>80%), with description of those lost to follow-up = 1 Completeness poor (≤80%) or no statement = 0

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SN	Criteria
7.	Appropriate statistical analysis Yes = 1 No = 0
8.	Source of funding declared Yes (financial disclosure, funding/support/grant declared) = 1 No = 0

### RESULTS

The majority of studies (Gross, Gallo, & Eaton, 2010; Penninx, et al., 1998) were from USA and one study was from Europe (Knekt, et al., 1996). All studies provided information from regional or nationally representative samples. Descriptive characteristics of the selected studies are presented in table.2.

**Table.2. Descriptive characteristics of the selected studies N=3**

First author	Quality	Total sample (% women)	Setting of cohort	Age Range (Years)	Depression questionnaire	Diagnosis (Data collection source)	Length of follow-up, number and/or times of follow-up measurements
Gross (2010)	High	3177	Population sample, cancer-free subjects	aged 18 and older	Diagnostic Interview Schedule (DIS)	Self reports and death certification	24 years, 3 times
Penninx (1998)	High	4825 (64.6)	Population sample, cancer-free subjects	71–96	Center for Epidemiologic Studies-Depression (CES-D) scale	Hospitalization records and death certificate	7 years Not specified
Knekt (1996)	High	7,018 (55)	Population sample, cancer-free subjects	30-95	Present State Examination (PSE)	Cancer registry	14 years Not specified

Included studies provided 15020 participants for the current review. The main inclusion criteria entailed cancer free adults who have depression at the time of study entry. Cancer-free subjects only were eligible for follow-up. When two studies (Gross, et al., 2010; Knekt, et al., 1996) had a wide range of ages included, one study (Penninx, et al. 1998) had subjects aged 71 years and older only. Duration of follow-up ranged from 7 (Penninx, et al., 1998) to 24 (Gross, et al., 2010)

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years. Whereas Gross, et al. reported the measurement of incidence of cancer during three follow up interviews (at 1 year, 12 year and 11 year) and also from the National Death Index, other studies (Penninx, et al. 1998; Knekt, et al., 1996) had not specified follow-up measurements but had specified sources such as Cancer registry, Death certificate and hospitalization records.

### *Definition and Operationalization of ‘Depression’*

Authors had not offered a theoretical definition for their concept of “depression”. The term for “chronic depression” was operationalized (Penninx, et al., 1998) for its presence when the number of depressive symptoms exceeded a specific cut off point on Center for Epidemiologic Studies-Depression (CES-D) scale at baseline (Table. 3). Respondents were referred to as persons with chronically and non-chronically depressed mood in one study (Penninx, et al.1998) and in another study, three mutually exclusive groups were identified by quantifying depression status as a lifetime history of major depression, a lifetime history of a dysphoric episode, or neither a history of major depression nor dysphoric episode (Gross, et al., 2010). Depressiveness score based on items of the 36-item General Health Questionnaire was categorized in one study (Knekt, et al., 1996). Gross, et al. applied Diagnostic Interview Schedule (DIS) (standardized, interviewer-administered tool) which is composed of standardized questions to measure symptoms, co-occurrence of symptoms in time, and other important factors, whereas another study (Penninx, et al., 1998) used the CES-D scale to determine the primary exposure of interest. Both scales were useful to make DSM-III diagnoses of depression. The third study (Knekt, et al., 1996) applied the Present State Examination (PSE), a standardized psychiatric interview schedule.

### *Relationship between Depression and overall Cancer*

Out of 3 articles selected, 2 studies examined the connection between depression and over all cancer (Table. 3).

**Table. 3. Predicting cancer from Depression: outcome measures in selected studies N=3**

Cohort	Number of total cancer patients (% on total) and cancer status	Cancer -Definition	Statistical test	Results (adjusted) reported in paper
Gross (2010)	334 cancer cases (10.51%) Sites: breast, colon, lung, prostate, and skin cancers	Participants reports of a history of cancer; Cancer was considered present if it was either a primary or contributing cause of death on a death certificate.	Cox proportional hazards model	1.9 (95% CI: 1.2, 3.0)
Penninx (1998)	402 cancer cases (8.33 % ) Sites: colon, prostate,	Any listed hospital discharge diagnosis or underlying cause of death with ICD-9 codes 140– 208. The first cancer	Cox proportional hazards model	1.88 (95% CI: 1.13–3.14).

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	lymphatic and hematopoietic organs, urinary tract, and breast	event that occurred during follow-up was used as a primary end point.		
Knekt (1996)	605 (8.6%) Sites: All sites, Lung, breast	Based on Cancer registry.	Cox proportional hazards model	0.99 (95% CI: 0.68–1.14).

The primary outcome assessed was the incidence of cancer after baseline assessment in relation to depression. When one study (Gross, et al., 2010) focused on the relationship between depression and incident cancer focusing on subtypes of cancer, another one (Penninx, et al., 1998) investigated whether high level of depressive symptoms when present for a longer duration is linked with greater risk of cancer. The relation between depressiveness and later incidence of lung cancer was focused in the third study (Knekt, et al., 1996). While Gross et al., found a significant association between depression and overall cancer, other two studies (Penninx, et al., 1998; Knekt, et al., 1996) reported non significant association with baseline depressed mood. But the risk was higher when the individual had long-term depressive symptoms (Penninx, et al., 1998). Heterogeneity was seen in outcome measures which might have been due to methodological differences. Thus, although chronic depression is learnt to be linked with elevated cancer risk, findings on association between less severe depressive episodes and cancer risk were not conclusive.

### *Links between depression and subtypes of cancer*

Analysis for subtype-specific cancers was reported in all studies (Table 4.).

**Table. 4. Predicting cancer from Depression: confounding factors adjusted for, mortality and secondary outcomes in selected studies N=3**

Cohort	Confounding variables	Cancer mortality (%)	Results (adjusted) reported in paper for breast cancer occurrence
Gross (2010)	Age, sex, race, marital status, H/o alcohol abuse/ dependence, and smoking, SES, parity when considering hazards for breast cancer.	Not specified	-Breast cancer- 4.4 (95% CI: 1.08, 17.6) Women only.
Penninx (1998)	Age, sex, race, disability, hospital admissions, alcohol intake, and smoking, BMI, use of antidepressants.	11 (7.5%)	-Breast cancer-No depressed cases of malignancy -Lung cancer -2.10 (95% CI: 0.49-8.92) -Colon cancer – 1.37

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			(95% CI: 0.33- 5.74) -Prostate cancer -1.47 (95% CI: 1.01 -22.79)
Knekt (1996)	Age, sex	Not specified	-Breast cancer-1.96 (95% CI: 0.88 -4.33) -Lung cancer- 1.65 (95% CI: 0.60 -4.58) only males

Gross, et al., (2010) investigated on the relationship between depression and incident cancer focusing on subtypes of cancer whereas another study (Knekt, et al., 1996) specifically investigated on the association between depressiveness and subsequent incidence of lung cancer as the primary outcome of interest. Yet another study examined it as the secondary outcome (Penninx, et al., 1998). When one study (Penninx, et al., 1998) reported consistent relationship between chronic depression and most types of cancer, another study uncovered excess risk associated with major depression and breast cancer (Gross, et al., 2010). While excess risk of lung cancer (Knekt, et al., 1996) was associated with high depressiveness in one study, there was no significant association found in another investigation (Gross, et al., 2010). Relative risks estimated in majority of investigations were based on very small number of individuals with depression. Non significant associations were reported between depression and cancers of prostate, colon (Gross, et al., 2010; Penninx, et al., 1998), skin (Gross, et al., 2010) lymphatic and hematopoietic organs, and of the urinary tract. This heterogeneity in findings might have been due to methodological heterogeneity and also insufficient numbers of cancer cases to calculate several hazard ratios for site-specific cancer types, as reported by all three studies.

### *Secondary outcome (Cancer mortality and association with mental disorders)*

Findings on secondary outcomes were not conclusive (Table 4.) as there was less number of studies and heterogeneity in methodology. The adjusted cancer mortality risk for chronically depressed mood was 2.22 (95% CI: 4 1.19–4.16) as reported by Penninx, et al. (1998). Findings on association between other mental disorders and cancer (Gross, et al., 2010; Knekt, et al., 1996) were non-significant although one study (Knekt, et al., 1996) reported a significantly greater risk of lung cancer among men with psychosis.

## DISCUSSION

Current review has attempted to systematically summarize results from 3 prospective studies (N=>100) with  $\geq 7$  years follow-up on association between depression and cancer. It hints a causal link between depression and cancer risk. Chronic nature and severity of depression seems to be the elements linking depression and later development of cancer. The association between less severe, short term depressive symptoms and site specific cancers is only suggestive possibly due to heterogeneity of cancer diagnoses and cancer types. Thus our findings remain suggestive but not proven. It is also found that there is simply not enough evidence to arrive a definite conclusion about cancer mortality and association with other mental disorders. It is likely that the

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current review barred a few high-quality studies along with studies of poor-quality. However, prospective measurement of the exposure variable long before the outcome had occurred is strength of most of the included studies. But it would not have had high influence on the robustness of findings because studies under the review were a few. Included studies had methodological differences and they differed in characteristics of depression and cancer measurement also.

### ***Evidence from other studies***

Though the current findings are not very conclusive of the current review, it is consistent with findings from previous meta analyses which had proposed a tendency concerning a small and marginally significant association between depression and risk of cancer (Oerlemans, et al., 2007; McGee, et al., 1994). Chronic nature and severity seems to be the elements linking depression and later development of cancer. Investigations with longer duration of follow-up have shown stronger relationships specifically for subtypes of cancer with hormonally mediated pathologies e.g, breast cancer. Because most cancer types have long latent periods (Oerlemans, et al., 2007; McGee, et al., 1994).

### ***Mechanisms explaining association***

Depression can either have a long, delayed effect on the risk of cancer, or it may predominantly act along with other known risk factors to increase the risk of cancer. According to hypothalamic pituitary–adrenal (HPA) axis theory patients with depression are reported to have hyper secretion of the cortisol, adrenal hypertrophy, and an increased cortisol response to adrenocorticotrophic hormone. Due to the immunoregulatory effects of adrenal corticosteroids there can be immunosuppressant (Miller, Spencer, McEwen & Stein, 1993; Stein, Miller & Trestman, 1991). Functions of the immune system are impaired by the individual's depressed mood and affect. This increases the risk for initiation or progression of cancer (Ader, Cohen & Felten, 1995). Another probable reason may be that health risk behaviours (e.g., reduced physical activity, excessive alcohol intake, and disorders related to over-eating) which are risk factors of cancer may be more among depressed persons (Kabat & Wynder, 1992; Lee & Paffenbarger, 1992). Extant literature report that depressed smokers find it difficult to quit the habit (Anda, Williamson, Escobedo, Mast, Giovino & Remington, 1990) instead, they inhale more deeply and smoke more cigarettes (Friedman, 1996) than nondepressed counterparts. It may also be that the age-specific vulnerability also predisposes a depressed individual to neoplastic disorders. Decreased motivation for surveillance of cancer among patients with depressed mood can not also be overlooked. Chronic depression remains largely under diagnosed and under treated in cancer patients.

***Strengths and limitations***

The initial search revealed that papers suitable for inclusion are widely scattered in journals of various disciplines. Though two studies had longer follow up periods the selected studies had several limitations that might have influenced the reliability of our findings. Gross, et al. (2010) had performed the sensitivity analysis thrice to test the robustness of findings and the study had longer follow-up times but differential follow-up, possibility of unaccounted important confounders, measurement of exposure variable with a relatively less sensitive tool, self-report as a data collection source for outcome measurement, methodological peculiarities e.g., not following the entire cohort to death or until a cancer onset, might have attenuated their findings. While the second study (Penninx, et al., 1998) had several points of measurement of depressive symptoms, it is limited by the short follow up period, analyses that included data for the first year also, the narrow age range of subjects, and the small number of chronically depressed persons. Lack of multiple follow-up times and changes of the psychometric properties of the depressiveness score during follow-up may also have affected findings of the third study (Knekt, et al., 1996). Cancer site-specific analyses were restricted on all studies by the limited number of cases.

The main limitation of the current review is limited number of included studies and lack of statistical analysis. Though the review had strengths of following PRISMA flow chart and executing a double data extraction technique, bias might have been introduced due to issues in the literature search. This may have led to leaving out any relevant article and also inaccuracies in the conversion of primary data. Second, due to time constraints, the current review focuses exclusively on published investigations. There is also a possibility for publication bias with positive results being reported and negative ones are not. Hence, the substantiation for an elevated risk of cancer in association with depression can be regarded as less sufficient and conclusions about the primary outcome of interest require more additional studies.

***Implications***

Findings that there can be a long delayed effect of depression which may increase the risk of cancer, or the interaction of depression with any of the known risk factors of cancer require further exploration. An investigation with a larger sample would enable statistical analysis and site specific cancer analysis. Future studies can focus on personality, health risk behaviors and other variables including anxiety to explain the depression-cancer relationship. Findings also draw attention from clinicians because depression influences the immune and hormonal systems of the body. Thus knowledge about the psychobiological mechanisms under which it operates becomes very crucial. Early detection of at risk individuals and appropriate interventions for protection from neoplastic disorders are very essential.



## CONCLUSION

In nut shell, individuals diagnosed with cancer are a client population with unique needs and demands. Though as such, any conclusion made may be moderated by the smaller number of investigations considered under this review, current study findings draw attention to a possible connection between depression and cancer. Thus it is necessary to widen the awareness regarding the relationship between depression and cancer. Viewed as a whole, results of the present investigation are supporting the hypothesis that depression increases cancer risk.

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